

EDUCATION OF PHYSICALLY HANDICAPPED CHILDREN



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**THE EDUCATION
OF
PHYSICALLY
HANDICAPPED
CHILDREN**

PREPARED
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OF THE

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OF EDUCATION
SACRAMENTO

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CALIFORNIA STATE DEPARTMENT OF EDUCATION
COMMISSION FOR SPECIAL EDUCATION

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FOREWORD

The past generation has seen a rapid development in educational service adapted to meet the needs of physically handicapped children. The right of each child to be provided with the instruction and training he requires to make the most of his possibilities is recognized, whether those possibilities be great or small. It is recognized, too, that adequate special provision can readily be made to prepare for more successful and worth-while living most of those who deviate from the normal so seriously that they cannot profitably engage in regular school activities. Many communities in the state have excellent programs of special education as an accepted part of the public school system.

Unfortunately, however, there are still many handicapped children who are either deprived of educational opportunity entirely or for whom the present provision is not adequate. This condition can be remedied through the active co-operation of the state, the counties, and the local school districts. The success of the program on a state-wide basis depends largely upon the willingness of every community in the state to accept its share of the responsibility for the education of its physically handicapped children.

As one aid toward the expansion and improvement of the program, this bulletin is presented by the State Department of Education. It was prepared by members of the Commission for Special Education of the Department. It is hoped that through extended application of the principles and procedures described, it may prove of ultimate benefit to the thousands of children in the state burdened with severe handicaps. Certainly, there is no group more deserving of generous help, and just as certainly many of the group, when given that training which will best serve individual needs, will become citizens able and willing to serve the community according to their respective talents.

Walter F. Dexter

Superintendent of Public Instruction



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PREFACE

Legislation authorizing special provisions for the education of physically handicapped minors was enacted in 1927. To administer these provisions a Division of Special Education was set up in the Department of Education, with a Division Chief and with Bureau Chiefs in charge of various phases of the program. The resignation of the Division Chief in 1929, however, left a vacancy which was never filled, and until 1936 the activity of the State Department of Education in this field was for the most part limited to the work of the Bureau Chiefs, each acting in his respective field.

The need for concerted action on general phases of the program as a whole became apparent, however, and in December, 1936, the Commission for Special Education was established by resolution of the State Board of Education to serve in lieu of a Chief of the Division of Special Education. It is charged with responsibility for administration of the state provisions for the education of physically handicapped minors and of the policies of the State Board of Education relative to special education. The members of the Commission are the Superintendent of Public Instruction, and the Chief of the Bureaus for the Education of the Blind, Education of the Deaf, Mental Hygiene, Correction of Speech Defects, and of Vocational Rehabilitation.

Although the Commission has been handicapped by the fact that each of its members has other full-time duties in his or her respective field, much has been accomplished for the special education program. A study of the current status of the program was made; a survey of physically handicapped children in the state provided data concerning the extent of the problem; general policies have been formulated; proposed minimum standard requirements for special classes have been established including a statement of qualifications for teachers of such classes. The Commission has also been active in the preparation and support of legislation for the improvement of the service. Local school districts have been advised and aided in the establishment of classes for the handicapped and in improvement of their programs. A start has been made in organizing teacher training courses to prepare teachers of classes of handicapped children and to establish in-service courses for such teachers.

Numerous inquiries and requests for information have received attention. In fact, the volume of such inquiries is one of the reasons for the preparation of this bulletin. It is published in response to a

popular demand that is evidence of a great and growing interest in this field of service.

It is hoped that other purposes will also be well served. The bulletin is intended as a guide to school administrators, to teachers of special classes for the handicapped, to regular class teachers, to school physicians and nurses, to agencies interested in the welfare of handicapped children.

The Commission believes that the welfare of the handicapped child demands the best planned, co-ordinated endeavor. The needs of the handicapped child differ from those of the normal child, and appropriate procedures must be made effective to take care of those needs. The life satisfactions of these children depend upon the attention and efficiency with which suitable measures provided for him are carried out. Essential to the success of the program is the whole-hearted co-operation among education services of the state, the counties, and local school districts, supplemented by the effective services of public and private health and welfare agencies, and supported by parents and an understanding public.

It is hoped that this bulletin may serve to aid in solving the many problems faced by those engaged in this field of service; that it may stimulate and encourage communities which are lacking in a program for their handicapped children to establish such a program. The way is clear: no child in the state should be, or need be deprived of educational opportunity on account of impaired physical condition. When these children are afforded this opportunity, family burdens are lightened; the child achieves his birthright of a chance for a contented, useful life; the community and the state profit by the productiveness of developed talents. To the fulfillment of this ideal the Commission dedicates its service and solicits the co-operation of all citizens of California.

The pictures on the cover are views of the Sunshine School in San Francisco and were furnished through the courtesy of the San Francisco Public Schools. The upper view shows a typical classroom and the provisions for rest and care of delicate children. The lower view shows the library used by orthopedic classes.

HARRY D. HICKER

Chairman, Commission for Special Education (1942)

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PART I

THE EDUCATIONAL PROGRAM FOR PHYSICALLY
HANDICAPPED CHILDREN



THE NATURE AND PURPOSE OF SPECIAL EDUCATION

RICHARD S. FRENCH, *Chief, Bureau for the Education of the Blind*

A POINT OF VIEW

The point of view in democratic states that accords a place within the social framework for each individual in proportion to his capacities finds practical expression in the organized effort behind programs of special education. The various groups of children in need of the services of special education programs have become increasingly a matter of concern and serious consideration within recent years. The most important element in the approach to the solution of the problems presented to the schools and communities by these groups is the recognition of the personality of the child, and his various relationships with his family, the community, and general society, and of the relative part to be played by clinics, schools, and other agencies of care, correction, and education. Perhaps the most vital principle of a democracy is expressed through this recognition of the individual as a person and of his rights in his relationships to social and economic units: his family, his church, business and workers' organizations, clubs and fraternities, and all other agencies that foster his development and to which he in turn contributes as member and participant. This view necessarily precludes the treatment of any person as primarily a cripple, or blind, or deaf, or even as gifted, for such a course misses the main point in specialization of treatment or education. The necessary distinctions and differences in methods and procedures prescribed for these groups are justifiable only in proportion to their contribution to a rich and complete personality. Although for certain purposes, as for instance in the teaching of reading through touch, the differentiation is very great and very necessary, emphasis in such teaching is not on braille and blindness but on the acquisition of a means of education common to all cultured humanity, namely on the printed or written work, on reading and writing.

For the purposes of education, the classification of exceptional children is often difficult because some confusion exists as to the scope of the general field of special education and its subdivisions; and procedures for educating these children are still in the process of change. Yet these very differences of opinion on controversial issues within the field of special education indicate an awakened general interest in children who need special education services. Due to the efforts of profes-

sional groups, the United States Office of Education, and many non-official National organizations interested in the welfare of the various types of handicapped individuals, a more humane and scientific attitude has developed within recent years.

In the older procedure, dating back into the eighteenth century, whenever a child showed gross unfitness, he was not given the benefit of scientific diagnosis, but common sense judgment relegated him to such categories as dunce, village idiot, squinteyes, and the like. More obvious cases such as might be called total deviants never got to school at all. For instance, the congenitally deaf and blind, the completely paralyzed, and those now classed as feeble-minded were simply considered hopeless from the educational point of view and no provision was made for them. Later when the need for specialized treatment for some of these cases were recognized, they were segregated and the persons labeled "defectives." The segregation as well as the term "defective" tended to fix a stigma on the members of these groups of handicapped persons. More humane educators revolted against this extreme treatment and instituted the movement for special classes within the regular public school organization, such as the classes for the blind, the crippled, the deaf, and pupils with speech defects. Until recently even those persons approaching the border line dividing the normal from the subnormal were not able to complete courses in which materials and methods of instruction were planned for the needs of some sort of an ideal adult.

Both mass education and the combined demands of industrialism and modern democracy have helped to bring about the change in practice. And the recognition of the place and rights of the deviant person has probably added its touch to the demand that education be given in accordance with abilities and needs and not by set formulae nor by a fitting of the individual into a mould devised without reference to individual differences.

The aim of a scientific and humane program of special education must be to fit these handicapped persons for normal living. Yet the program must be sufficiently realistic to acknowledge the limits of such normalization, and sufficiently free from sentimentalism to admit the necessity of permanent custodial care for certain cases, of correctional discipline in others, and of a condition of complete dependence in many, and of the consequent necessity of aids and pensions. But even in those instances where hard reality demands the recognition of the fact that no amount of effort can bring about a normal human life and normal human relationships, the principle of human worth is still recognized. Thus any treatment that regards human beings as mere waste can not be countenanced. Such a philosophy as is implied in

segregation at the lowest possible cost to society can have no place in a view that is either humane or scientific. In accepting the fact that limited numbers of children and young people, as well as adults, must be segregated and perhaps confined for the good of society, the right of these unfortunates to develop to the limit whatever human qualities they may possess is fully recognized.

Those who have worked with groups of handicapped persons for any length of time and have given serious and constructive thought to their problems as a part of the more comprehensive problem of education as a whole are inclined to stress the right of the handicapped or defective person to be a partner in his own rehabilitation and growth. The handicapped child cannot be subjected to a pattern of education nor to a mental and moral conditioning which seeks to cast him in a set mould of traditionally accepted behavior any more than the normal child. A point of view that regards the handicapped pupil as a human being with individual capacities is directly opposed to a stereotyped program of education that seeks to turn the blind pupil into an exemplary member of a group of other blind persons, or to have the crippled child develop into an uncomplaining cripple. Such an education tends to produce a capitalizing of defects and might even produce such a social phenomenon as that of the beggar guilds of China and of Europe during the Middle Ages, when bands of handicapped persons joined together in monopolistic groups to exploit their own infirmities. A constructive and progressive plan for a program of special education recognizes the right of its charges to grow into the full stature of cultivated human beings, and to become broadly and genuinely human in the process; for example, the right of the trained cripple to be regarded as a master craftsman and useful citizen, regardless of his physical condition.

Numerous examples might be cited to illustrate and to substantiate this attitude toward the education of the handicapped. For instance, one of California's most famous ministers of religion and pulpit orators was a man of insignificant stature, a hunchback who stood less than four feet six inches in height. In the pulpit he surmounted his handicap by his convincing eloquence and radiant personality until every thought of deformity was banished from the thoughts of his congregation. There is, too, the story of a well-known Scotch divine who was a noticeable cripple but a very eloquent preacher. On one occasion a thoughtless stranger, in complimenting him on his sermon, said that she had often wished to hear the famous *lame* preacher. His quick retort was, "Lame man, I admit, but lame preacher, never!" Clarence Hawkes, the distinguished naturalist, might equally exclaim, "Blind man, yes I admit it, but blind author

and blind naturalist, never! For what I describe I once saw and still see, and what I describe I see perhaps more vividly and penetratingly than most of those who possess a good pair of functioning eyes."

"Handicap" and other like terms are after all relative, and it is the actuating mind that makes the senses and muscles do effective work. A Helen Keller, deprived of two senses, is a great, intelligent, and noble woman and outstanding author. A deaf Douglas Tilden can still see unrevealed beauty of form, and from his creative brain call forth imperishable works of the sculptor's art.

CHANGING TERMINOLOGY

In a search for suitable and comprehensive terms by which to designate the groups which come within this field of special education, various term words have been sanctioned and discarded. The designations "atypical" and "handicapped" were once accepted by workers in this field, but recently they have been superseded by others. Both these earlier terms seem to imply inferiority; furthermore "handicapped" cannot properly be used to describe pupils of superior endowment who come within the purview of special education. The terms "exceptional children" and "special education" have about equal favor in current usage.

BASIS FOR SPECIAL EDUCATION PROVISIONS

The scope of special education has been defined and the pupils who should receive special education services have been classified by the Commission for Special Education of the California State Department of Education. In general, as a working basis for its activities among exceptional children, the Commission has assumed that a person who so deviates from the normal in physical characteristics or behavior as to require special methods of teaching, special materials for study, and special equipment for the classrooms, is a case for special education. In short, the facilities for special education are intended for those persons, who, because of exceptional deviations, are not able to benefit by regular classroom instruction.

Within limits a child may be said to constitute a special case whenever he fails to fit into his age group in school or class to such a degree as to call for undue attention and to constitute an extra drain upon the energies of the teacher and the school, or when he obviously cannot do the work of his class or group because of some defect in structure or function or in his social adjustment. If, with a minimum of special attention, the child can adjust himself so that he can progress at a normal rate, then he is not a case for special education. If, how-

ever, with special attention and the application of simple remedial measures the child continues to be maladjusted and by obvious signs of failure shows that he cannot benefit from ordinary classroom procedure, then his education within the regular school or class must be given up, for otherwise unjustifiable changes must be made in regular classroom procedure to adapt it to his peculiar needs.

Where the line should be drawn and just how many children should come under the purview of special education depends upon two main factors; the need of the child for specialized attention, always a matter of degree as well as of difference in kind of treatment, and the ability of society to pay the differential of cost necessary to provide the required attention. Good sense and economic considerations demand that the numbers singled out for specialized attention be kept as low as is compatible with individual and social welfare. A humane attitude toward deviating individuals should not lead to extreme measures: for example, opportunity for special education need not be devised for persons whose stature is outside the normal range. To segregate dwarfs and giants would be absurd.

SPECIAL EDUCATION GROUPS

The Commission has classified the pupils who should receive the services of special education into the following groups:

1. Blind and partially sighted
2. Sight-saving cases
3. Deaf
4. Hard of hearing
5. Crippled ¹
6. Those with lowered vitality
7. Those with speech defects and disorders
8. Mental defectives
9. The nervously and emotionally unstable
10. The socially maladjusted, that is, those presenting various types of behavior problems traceable primarily to environmental conditions
11. The gifted

The first four groups of this classification include persons in whom the limitation or absence of one of the two major avenues of sense—sight or hearing—affects their ability to learn. The fifth and sixth groups and to large extent the seventh include persons in whom the defect or handicap is primarily physical, either anatomical or functional

¹ These pupils are now more commonly classed as "orthopedic cases."

or both. This bulletin is limited to a consideration of the seven groups of physically handicapped children.

No absolute distinction can be made among these groups on the basis of the nature of the handicap. Even a practical classification frequently includes more than one type of handicap within a group. Thus blindness is frequently accompanied by nervous ties and by marked social maladjustment and very often by speech defects. Therefore cases are usually segregated according to the handicap or defect which is sufficiently outstanding to lead to a recognition of the need of segregation or of specialized attention in some form.

The complexity of the whole problem of classifying these pupils must be taken into consideration in school practice or great injustice may be done the individual child as well as the special group to which he is assigned for classes. The remedy to be applied, depending upon whether the maladjustment is due to sense defects, to other functional disturbances, to mental defects, or to social causes, is of a special or differentiated kind or nature. Thus the methods of special education applicable to cases of visual defect are different from the methods applicable to cases of hearing defect, and equally the methods of special education suitable for persons with impaired or partial vision or hearing will differ greatly from those suited to the totally blind and totally deaf. The only acceptable procedure then is to study the individual case history. Otherwise a whole class of blind children of normal mentality may be continuously upset by the assignment to that class of just one case of feeble-mindedness with visual complications. The situation is made worse when the feeble-mindedness is further complicated with sullenness and other misbehavior tendencies. The welfare of children in special classes is frequently better served by grouping mentally and emotionally comparable children than by the exhaustive inclusion of all children with a definite defect such as partial or complete blindness. One of California's most brilliant educational leaders would have been placed in a group of the partially blind if his visual defect alone had been taken into account. In the state of education of the visually defective at that time such assignment might have had almost fatal consequences. The chief aim is to bring these children nearer to a normal state. This aim can be accomplished in completely segregated groups, but the safest principle for general guidance is "the less segregation the better."

It is no longer good practice to discover the exceptional child when he has already demonstrated that he is a misfit; it is the function of the educational specialist to discover the kind and degree of handicap and see to it that the child does not become a misfit. The fact that any child or youth becomes a misfit reflects in some degree on the kind of education provided in his or her community. If the proper prognostic

and diagnostic means and procedures are at hand in a school system and that system is properly organized and equipped, only the rare child will fail to respond to treatment provided either in the regular or special class, and require attention outside of the organization and facilities of that school system. In such rare cases the investigators and administrative officers of that system will undoubtedly know the correct procedure and follow it.

In all cases the chief defect, whether precisely measureable or not, should be studied as a part of a whole. At best the "picture" of any child is an incomplete mosaic. To leave out any parts of the picture that fall within our powers of discernment is to arrive just that much short of our goal of understanding the whole child. Thus behavior problems may arise from the loss of an arm; a youth who has to give up for such a cause some cherished ambition, needs to be treated with understanding and "counseled" into new directions of ambition and endeavor. The sudden oncoming of blindness has been known to lead to suicide, with "all hope blotted out" in the view of ambitious youth. The wise examiner as well as the wise counselor will surely try to see things whole and especially to see personality in its potential wholeness.

THE NATURE OF THE EDUCATIONAL PROGRAM FOR PHYSICALLY HANDICAPPED CHILDREN

HARRY D. HICKER, *Chief, Bureau of Vocational Rehabilitation*

The specific practices described below are applicable to the field of special education. It should be remembered, however, that special education is not an entity all-sufficient in and of itself. It can not be dissociated from the larger field of general education of which it is a part. Neither can it be entirely dissociated from the community and the activities of the community, any more than general education can be rendered independent of community influences. Three general considerations should therefore be kept in mind during this discussion.

First of all, local school officials, as well as special teachers, should be thoroughly familiar with facilities and services which may supplement their own local program of special education. They should know of hospital and clinic facilities for physical examinations and orthopedic services, of child guidance clinics and the various testing procedures, of correctional schools and residential institutions for the feeble-minded and epileptics, of special residential schools such as schools for the blind and schools for the deaf, of local and residential trade and agricultural schools, of crippled children's services, of the program of the Bureau of Vocational Rehabilitation of the California State Department of Education which offers a service of vocational counseling and specialized training for the physically handicapped.

In the second place, the existence within the state of an organized program of special education does not relieve school officials and regular class teachers from responsibility for the welfare of the exceptional child, even though they are not charged with specific responsibility in connection with the special program. They should be ever on the alert to discover physical or mental impairments; they should see that diagnosis is made, to be followed by reference for appropriate remedial or educational treatment, or to make local adjustments which may benefit the child.

Finally, the application of any general formula of education must be made only in the light of particular circumstances; obviously such application can not be alike in all cases, and in some instances a general rule can apply only in restricted ways. The foregoing considerations do not affect the validity of the administrative practices in special education outlined here, but indicate that such practices must be interpreted in terms of all factors involved in a particular case.

RESPONSIBILITY FOR ADMINISTRATION

The program of special education should be conducted and administered by local school districts under minimum standards prescribed and enforced by the State Department of Education, or, in the absence of adequate district facilities, by the county superintendents of schools. Exception to this rule occurs in the case of residential schools for deaf pupils and for blind pupils maintained by the State.

SCOPE OF PROGRAM FOR SPECIAL EDUCATION

The special program should include remedial treatment, social adjustment, instruction, counseling and vocational training; all of these phases to be so co-ordinated as to form a continuous, interrelated chain of endeavor. This special program should be supplemented, of course, by provision for discovery of cases needing special attention and by placement and follow-up service at the close of the period of preparation.

HOME AND SCHOOL CO-ORDINATION

Every effort should be made to co-ordinate school and home activities, through a reciprocal relation between teachers, supervisors, and administrative officers on the one hand and parents on the other.

INSTRUCTION AND TREATMENT

Concurrent Provision. In cases where physical treatment is involved, instruction should be provided concurrently with treatment and not deferred until maximum physical restoration is attained. To this end educational facilities should be provided (1) in hospital or sanatorium, (2) in convalescent homes, (3) in the child's own home, (4) in special classes in the schools, or (5) in any combination of the foregoing.

Order of Precedence. In the case of special classes in hospitals, sanatoriums, and convalescent homes, emphasis should be placed first on physical care and restoration but with concurrent instruction; in special classes in the schools education should command first consideration with physical care supplementary.

Importance of Physical Restoration. The possibility of maximum physical restoration must never be overlooked, since this is all-important to the child. Every effort of all concerned should be directed toward a complete understanding of the defect or defects in a given case, proper reference for treatment, and the use of rest, exercise, occupational therapy, or physical therapy, as may be specifically indicated.

ASSIGNMENT TO CLASSES

Regular Class Preferred. Regular classes should be used in preference to special classes whenever possible. This implies that the child should be transferred from the special class to a regular class as soon as the need for special attention ceases, and also that special classes be closely co-ordinated with regular classes. The child in a special class should use that class only for the special training made imperative by his handicap and depend on the regular class organization to maximum possible extent for all other school activities.

Group Instruction Preferred. Home instruction as the chief or sole means of education should be used as a last resort and only when it is not possible for the child to attend regular or special classes.

Temporary Assignment. The distinction between children only temporarily in a special class and those permanently or semipermanently in such class should always be kept in mind.

METHODS OF INSTRUCTION

The regular course of study should be followed as closely as possible. Modification is permissible only in so far as is necessary to meet the specific educational needs of the various type-groups of exceptional children.

Reading. Subject to the sound pedagogical principle that reading should not be started at too early an age, this subject should be given special attention in the case of pupils with impairments which seriously restrict physical activity. With good reading ability and correct reading habits they are enabled to acquire through the printed word information and knowledge concerning life situations which the normal child acquires through direct personal contact and observation.

Other Aids to Learning. The radio, the phonograph, and the motion picture have a special importance in the education of physically handicapped children, for the reason that these aids bring to them experiences from which they might otherwise be precluded on account of impaired condition.

COUNSELING

Counseling, social, educational and vocational, is even more important in the case of the handicapped child than in other cases. Provision should be made to direct the child's program in such a way as eventually to lead to vocational fitness in a suitable type of work. Co-ordination of the general educational with the social and vocational program should be such as to produce an unbroken chain of endeavor.

VOCATIONAL TRAINING

Most handicapped persons can be made employable if adequately trained for a suitable occupation. Many may require a type of training not usually available in public schools. If the vocational courses in regular or special schools do not fit the needs of any individual he may be referred to the Bureau of Vocational Rehabilitation for specialized training.

PLACEMENT

Placement in suitable employment is the responsibility of the school, and follow-up to determine success on the job or the need of further adjustment is an essential part of the placement process. Special co-ordinators may be appointed as provided in School Code section 3.609 to aid in placement. School Code section 3.610 provides for the co-operation of the State Department of Employment in the placement of physically handicapped pupils. The State Bureau of Vocational Rehabilitation also includes placement as a phase of its service for the physically handicapped.

ORGANIZATION AND ADMINISTRATION OF EDUCATION FOR PHYSICALLY HANDICAPPED CHILDREN

RICHARD S. FRENCH, *Chief, Bureau for the Education of the Blind*

Complete programs for the education and care of physically handicapped children are made possible under the legal provisions adopted by the State of California. Local school districts are empowered to care for the special needs of physically handicapped minors; to provide instruction in special schools, in special classes in regular schools, in hospitals, in sanatoriums, or in the home through the employment of home instructors, by co-operative arrangement with the Bureau of Vocational Rehabilitation of the California State Department of Education; to furnish transportation to and from class if necessary and special personnel and special care during class hours; to set up guidance and counseling services.¹ The cost of all services for physically handicapped pupils thus authorized in local school districts, over and above the cost of educating other pupils but not to exceed a cost of \$200 for each handicapped pupil, is paid by the state.² The entire cost of individual instruction is construed as excess cost. This provision is of particular benefit to the smaller districts since they may, without local expense, supply part-time teachers to instruct a few pupils.

In addition to these services that the law provides may be established by local school districts for physically handicapped children, certain other services are offered directly by the state: the care and education of the blind and persons with seriously impaired vision at the state residential school for the blind; the care and education of the deaf and persons with seriously impaired hearing at the state residential school for the deaf; and vocational rehabilitation through the Bureau of Vocational Rehabilitation for disabled persons, both adults and young people sixteen years of age or over, who are deemed capable of being rendered self-supporting through special training.

In exceptional circumstances where the county superintendent of schools finds that any physically handicapped pupil is not receiving proper educational advantages in the schools of the local district, he is authorized to provide such services as he deems adequate.

¹ California School Code sections 3.605, 3.606, 3.607, 3.608, 3.609, 3.611, 3.612, 3.614.

² Detailed information on the apportionment of funds to special classes for handicapped pupils is contained in the following publication: Walter E. Morgan. *State Apportionments for the Education of the Physically Handicapped Children in California*. Bulletin of the California State Department of Education No. 9, October, 1939 (revised).

Thus with the exceptions just noted, the establishment and maintenance of programs for the care and education of physically handicapped children are the duty of local school district authorities. The degree to which such a program can be complete and serve all the needs of the various types of cases depends first upon the population of the district. Obviously the complete program authorized under the state law can be undertaken only in populous school districts where there is a sufficient number of cases of each of the various types of handicapped children to warrant special schools or special classes for each type. Actually the degree of equality of educational opportunity that prevails in any community, regardless of population or financial resources, hinges upon the willingness of citizens to extend these opportunities. Therefore the program for special education even in the largest school districts goes back ultimately to the willingness of the community to care for its handicapped children. The two large cities of the state, San Francisco and Los Angeles, have complete and comprehensive programs. In proportion to their population, many of the smaller cities have programs of special education that are as extensive as feasibility and need warrant.

In many of the larger school districts of California, the needs of practically every type of handicapped child are accommodated, except that there is no local school for the blind, and there are only two local schools maintained for the deaf, one in Los Angeles and the other in San Francisco. In Los Angeles special classes for the blind and in the smaller cities classes for the blind and classes for the deaf are organized under the supervision of special teachers.

The programs offered in the populous school districts of California range in completeness from the comprehensive services of a segregated school with graded classes for each type of handicapped pupil in San Francisco and Los Angeles to the segregated classes for various groups of handicapped children within the regular school in the smaller cities.

In small school districts in which the numbers of pupils of each of the various types of handicapped are few but whose citizens are eager to care for the needs of every child in the community may do one or all of these things: set up special classes for certain types of handicapped children, furnish special facilities and special instruction within regular classes for other types, and employ instructors for pupils confined to home or hospital. In the case of very small school districts that are unable to provide these partial and limited services for handicapped pupils, several such districts may join together to provide special education opportunities for the children of a region. Such a combination of small school districts can arrange to hire teachers for bedside instruction, establish special classes for groups of handicapped pupils,

or send pupils to school in some near-by center where special education facilities are available.

There are sparsely settled rural communities where the most seriously handicapped pupils must be assigned to hospitals or state residential schools for adequate care. The great disparity between the facilities available for the education of handicapped children in these sparsely settled and relatively poorer communities and those in the more densely populated and richer areas must be kept in mind in attempting to deal with certain types of sight conservation cases and borderline cases of any type where segregation is advisable. Borderline cases among the deaf and the blind in rural districts that cannot reasonably be expected to give local care and attention must usually be assigned to the state residential schools if the waiting lists permit. Seriously crippled pupils should be sent to centers of population where special facilities for their care are available. The district of residence and the district of attendance can make some contractual arrangement to finance the education of such crippled children in case the local apportionment and the state reimbursement for excess cost is not sufficient to cover all cost. The care of pupils who must be supported away from home is maintained through such private and public aids as may be available.

In general, whether or not financial resources of local school districts permit the establishment of complete facilities for handicapped minors, local school authorities should be expected to furnish the means of discovering the pupils with handicaps that seriously impede their progress in regular schools and classes. Such discoveries can be made through the use of examinations and other devices. Once the pupils in need of aid are discovered, state and county authorities can be consulted as to what help can be given. Where the handicap is such as to indicate that the condition can be alleviated through improvement in the child's surroundings at home and in the regular classroom, the local school administrator should consult with teachers and parents as to how best to handle the problem. Thus a case for a sight conservation class may be successfully handled by having the child placed in the most favorably lighted part of the classroom with due attention to height and placement of the desk, a careful selection of books with regard to print and paper, some special attention in the preparation of his lessons and in having his fellow pupils or parents read aloud to him. A partially blind or totally blind child can not be so treated, and school authorities in such a case should advise with the home and with the State Department of Education in having the child placed in the state residential school.

School districts, then, have sufficient legal powers to organize complete programs of special education for physically handicapped children. These districts are limited by the factor of population, which materially affects the amount and extent of such program, yet no district need neglect its handicapped children if the citizens are willing that each child have the benefits of free public education and care according to his needs.

In circumstances where adequate educational facilities are not established for physically handicapped pupils through the local school districts, the county superintendent of schools can set up and administer a county program of education and care. Under the provisions of School Code section 3.622, the county superintendent of schools may organize the type of program which he deems adequate. The service thus provided often includes only the hiring of bedside teachers. If there is sufficient need, however, it can include the establishment of emergency elementary schools, the employment of emergency teachers to give instruction in the regular elementary school districts of the county, the establishment of special classes of secondary grade. Examples of the type of service which can be provided through the office of the county superintendent of schools are found in Orange County, where eight bedside teachers are hired, and in Siskiyou County, where one traveling teacher serves seventeen pupils. The cost incurred for classes and instruction for the physically handicapped by the county superintendent of schools is paid from the unapportioned county elementary school fund and the unapportioned county high school fund.

In view of the rather far-reaching legal provisions permitting establishment of programs of special education, including the important provision of reimbursement from state funds to local districts for excess cost, neglect of the physically handicapped child is not justified on financial or other grounds.

TYPES OF ADMINISTRATIVE ORGANIZATION

In practice the administrative organization for programs of special education in California depends upon the amount and extent of the services offered. Actually in the local school districts and counties of California there are various types of organization to fit various programs. The most typical administrative organization for the different sized districts and counties are described here.

In the small school district the administration of the program of special education for physically handicapped children is under the direct supervision of the superintendent of schools or principal. In terms of organization it is administered as a part of the total school program.

In the medium-sized school district where the program of special education is more complete and serves a greater number of pupils, the administration of all types of services for the physically handicapped is usually co-ordinated under an assistant superintendent of schools or a director.

In the large school district where some provision is made for each one of the various types of handicapped children, the administration is likewise under an assistant superintendent of schools who has assistants in charge of the separate types of services. For example, a special director or supervisor in such a district would have charge of the education each of the following types: blind and sight-saving cases; deaf and hard-of-hearing cases; speech correction and speech disorders; crippled children, and tuberculous, nutritional and cardiac cases. Assistant directors may have charge of subgroups of each of the foregoing classifications.

In counties where the special education program for physically handicapped children is administered through the office of the county superintendent of schools, it is usual for the whole program to be in charge of an assistant or deputy county superintendent of schools. If the program is extensive, each type of service offered can be assigned to a director or supervisor as in the case of a large city school district.

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PART II

EDUCATIONAL PROGRAMS FOR SPECIFIC TYPES
OF PHYSICALLY HANDICAPPED CHILDREN



THE EDUCATION OF THE VISUALLY HANDICAPPED: THE BLIND AND SIGHT-SAVING CASES

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INTRODUCTION

The Extent and Nature of Visual Defect and Disability

The number of persons suffering from visual defects has been variously estimated. The figure has been placed by one authority at 31 per cent of the general population and includes persons whose vision is presumably impaired to a sufficient degree to cause at least inconvenience. However, until a comprehensive survey of visual handicaps is made, and until better agreement can be reached on what constitutes a visual defect, it is impossible to present more than an approximate figure. It is obvious, however, that the proportion of the general population suffering from visual handicaps is both large and increasing, and that a large number of those so afflicted can be aided by either remedial or educational measures or by both.

Because vision is so important in the general conduct of life, any nonremediable defect, impairment, or loss of vision has the effect of slowing down or seriously weakening or even eliminating certain functions or processes often of vital importance in the normal conduct of an individual's affairs. Total loss of sight or absolute blindness naturally offers one of the greatest hindrances to learning and to most other normal activities. Even a sense of light and dark with no discrimination of color, form or distance, has its utility; but the utility of vision depends upon fineness of discrimination in these particulars. It reaches its greatest utility when, with equal acuity in both eyes, definition, clarity, distance perception, perception of motion, and fineness of color discriminations are at the maximum possible for a human being, and when the mechanisms of accommodation to intensity of light and to distance and nearness of objects, and that of the fusion of images, function with quickness and automatic precision.

Defects, then, consist in anatomic or functional interferences with the function of vision and may be temporary and occasional, as in the case of fatigue, or lasting, as in the case of congenital cataract, or even permanent in such cases as those produced by severance or atrophy of the optic nerves. The most common defects interfering with the learning process and other normal life processes are dimness of vision, cutting off of the supply of light, interference with the

axis of vision so that sharp images cannot be formed centrally, defects of the yellow spot and fovea centralis, defects in retinal receptivity, spasmodic motions of the eyeballs, crossing or divergence of the axes, and reduction of acuity for either nearness or distance. All defects except total blindness exist in degree and are measurable, though color blindness and the absence of certain visual elements in the central areas partake somewhat of the absolute nature of total blindness. Affections of the accessory organs and parts are almost as important as of those directly concerned in vision. Thus inflammations and granulations of the lids, interference with the protective parts and mechanisms such as stoppage of tear ducts, and many other often apparently trivial disturbances may be vitally important or merely annoying or disfiguring.

Relation of Remedial Measures and Educational Provisions

Acceptance of the fact of the importance of vision and acknowledgment of widespread and increasing visual defect and disability lead to a consideration of what recourse may be had to sound advice in eye hygiene, what remedial agencies are available, and what educational steps may be taken when the degree of defect makes specialized education necessary or advisable or when remedial measures must be postponed or prolonged and educational devices employed until cure or betterment is effected. Remedial measures should be undertaken only by wholly competent persons whose trained intelligence and high degree of technical skill fit them to deal with the eyes both as physical mechanisms and as functioning parts of an organic whole. Equally, the educational measures undertaken for persons with seriously handicapping visual defects should be entrusted only to trained specialists with highly developed technical skill, preferably in schools or classes developed for this specialized educational effort, where favoring conditions of controlled environment and adequate equipment may be guaranteed.

One would not entrust a fine automobile to a roadside blacksmith and yet the care and treatment of the eye, a mechanism ten thousand times more complicated and delicate, is often entrusted to blundering and half-trained technicians and "healers of sorts." Both for examination of the eye and for such surgical, medical, or mechanical adjustment measures as may be indicated by examination, the services of specialized and highly trained staffs should be available to all. An increase of 200 per cent in clinic services for persons suffering from visual defects would not be sufficient to make possible examinations and corrective measures to the extent they are needed. Both

from the point of view of the healing arts and sciences and of education, adequate clinics for examination and treatment are called for in all communities, even in the most sparsely settled districts.

Educational agencies should be organized to parallel the efforts of the finding and curative agencies and co-operate with them. To have the one kind of organization without the others is to leave things half done. Surely every child and every adult person is entitled to the fullest and best use of his visual powers and, when those powers are impaired, to the compensating factors of education and of social and economic adjustment. Along with the regular medical and educational agencies such auxiliary aids in examination, environmental conditioning, and economic placement as are reasonably well standardized, and reliable, should be established. There is no simple solution for problems having to do with lighting, desk adjustment, improved print and paper and similar aids, and in these as in other matters the counsel of a reliable expert is indispensable.

Educational Methods Suited to the Needs of the Blind and Sight-saving Cases

The methods suited to the education of the blind and to persons with defective vision—sight-saving cases—are so different that a combination of the procedures suited to each group and the assignment of blind pupils and sight-saving cases to the same class may have unsatisfactory results. Blind and partially blind children must learn by means of touch and hearing what the pupil with low vision acquires through sight in much the same manner as the child with normal vision, though in reduced quantity or degree. Different methods of reading instruction offer an illustration. The sight-saving case will learn to read more slowly than the child of normal vision for the rate is directly affected by his defective vision. The blind child, on the other hand, who reads braille, will learn to read at a much slower rate than the child with defective vision for two reasons: the inherent difficulty of adapting the sense of touch to reading, and the much greater amount of space to be covered for a given amount of material. In actual practice some sight-saving cases, from small communities where the cost of providing equipment and instruction locally would be excessive, must be taken into residential schools for the blind. Likewise, it may be said that methods used in educating the partially blind are better adapted to the needs of the sight-saving cases than are sight-saving techniques to the education of the partially blind. The pupil in a sight-saving class must have such aids as books

in 18- or 24-point type and objective learning devices. Blind and partially blind pupils must learn to read Braille and learn from objects and apparatus that appeal to the senses of hearing and touch. The reading of Braille is not taught to pupils in sight-saving classes, and where such pupils cannot be furnished the required books in large type, the services of a reader should be utilized.

Individual and Group Instruction

In general the earliest instruction of the blind and partially blind must be individual; and class instruction is difficult even in the higher grades, because the procedures must include the use of objects and do not depend entirely on verbal methods. Group instruction is possible only in the speech arts, social studies, history, literature, and other subjects which may be taught by verbal methods. In sight-saving classes, on the other hand, groups of from eight to twelve are advisable from the beginning, especially if fairly homogeneous grouping is possible.

Similarly a sight-saving group requires equipment and environment not markedly different from the normal, except for large-type books, whereas a school or class of the blind must have peculiar equipment and arrangements. Braille books require up to several hundred times the space required by printed copies of the same book. For example, a student's dictionary of ordinary book size in print in Braille requires a case of three shelves with a total of over thirty volumes, each many times the size of the printed book. Braille slates and key writers, more abundant models for the teaching of the sciences, geography, and other subjects adapted to objective rather than to verbal methods of teaching, a great many typewriters and the almost constant use of typewriters, and many musical instruments, increase the sense of the unusual in a residential school for the blind or in properly organized and equipped day classes for the blind in the public schools.

Bureau for the Education of the Blind

A new policy for the education of the blind and the sight-saving group in California was formulated and undertaken in 1929 by the California State Department of Education. At that time the Bureau for the Education of the Blind was established within the Department with the Superintendent of the California School for the Blind as the Chief. The function of the Bureau is to co-ordinate and unify all efforts pertaining to the instruction of the blind and sight-saving cases. The Chief advises local school districts on problems related

to visually handicapped pupils, visits special schools and classes, and passes on credentials for teachers of classes for the visually handicapped.

THE BLIND

In general a blind person is defined as one whose visual acuity is less than 20/200 in the better eye with whatever correction may be afforded by lenses. More practically, and from the point of view of educational methods, a person is blind when tactual aids and devices, particularly the braille system of reading and writing, must be substituted for the usual visual means and devices in his educational training.

From the economic point of view, a person is blind when his visual defects preclude his following most trades and professions in the normal way and restrict him to certain selected occupations or to the performance of limited duties in connection with some general occupation. Rare indeed is the blind person who can continue in the occupation he followed before he lost his sight. The case of a heart specialist who continued to practice after he was totally blind is one of the few instances that can be readily cited. Persons with seriously impaired vision are limited economically. They find few occupations which they can follow if the impairment is present before they are trained. Often they are not able to follow the occupation for which they are trained if the impairment occurs later. The bookkeeper who loses his vision to the point of economic handicap may earn a living as a salesman, but only after he has been given special vocational rehabilitation. Even a slight impairment of vision may be an economic handicap unless the person can be rehabilitated and trained for work in which he is less dependent on the full use of his eyes.

In the education of the blind and the partially blind, the pupil must be regarded first as handicapped in ordinary life situations by lack of vision, second, as restricted in his economic outlets, and finally as in need of special educational methods. Furthermore, since no two cases are exactly alike as to the age of becoming blind, degree of mental endowment, and reaction on the part of the person to his own condition, the education of the blind involves to a much greater degree than other types of education, vocational guidance with emphasis on problems of personal adjustment and provision for maladjusted personalities, with the technical aspects definitely subordinate to a larger and more pressing problem or series of problems. It is evident that from the point of view of employment and of general economic efficiency, visual defect is one of the most serious physical handicaps; and out of the vocation restrictions and limitations grow a major part of the problems arising in both the education of the blind and in the work

of sight conservation. In the field of general education, however, work with visual defectives, where other complicating factors such as feeble-mindedness are not present, presents no insuperable difficulties. The totally blind as well as those with handicapping visual defects have made notable academic records and have won distinctions in literature, in scholarship, in the legal profession, in teaching, and notably in music.

Numbers and Location

Blind persons in California number about eleven thousand. This ratio of approximately one to seven hundred of the general population is above the national ratio. The proportion of those of school age cannot be estimated accurately, since definitions of what is a blind person are not agreed on, different practices in the education of the blind are followed, and the machinery for co-ordination of effort is lacking. A fair estimate would place the number of blind of school age and young adults in schools, colleges or universities as not over fifteen hundred or roughly 12 per cent of the total blind population. It is a well-known fact that most cases of blindness occur after the person reaches maturity. Less than three hundred are actually in school or attending educational institutions. The number of younger adults employed or employable has never been adequately determined, but it is safe to assert that of the total blind population not over 15 per cent are or can be gainfully employed and the actual number gainfully employed is very small. This makes the major problem in connection with the care of the blind one of state and local aid and of personal adjustment.

Nearly one-half of the total blind population of the state reside in Los Angeles County. The same is true of the school population if residence of parents is taken as residence of pupils. The largest concentration of college and university students is in the San Francisco Bay region.

Education: State and Local Provisions

Segregation. The education of the blind involves specialization in equipment more than in method. Since the equipment is elaborate and expensive and can only be successfully used where gradation on a fairly large scale is possible, the bringing together of considerable numbers of blind children is desirable from the economic and technical point of view. Again the single blind child in a social environment with children with normal sight is likely to be pushed aside and neglected. He finds a more congenial environment with associates who have some degree of visual handicap. He must in his own interest be

separated from so-called normal environment for at least the school day, as in large city school systems with classes for the blind, or for so many months out of the year in a residential school.

Home, School, and Social Environment. In any case, the blind or partially blind child should be kept conscious of home ties and the greatest possible co-operation with the home secured. On reaching maturity blind persons should be encouraged to find their places in their home communities and in the local economic life, with normal social contacts. To congregate in populous centers and to segregate themselves into blind societies is largely to give up their social birthright. The blind person who, on the completion of his schooling, establishes himself economically and socially, not as blind craftsman, blind musician, or blind attorney, but as a good craftsman and good citizen, an outstanding musician, a notable and successful attorney, or an exceptional teacher, has accomplished all that can be asked of any person regardless of handicap.

Schools. The California School for the Blind is a residential school maintained by the state at Berkeley. This school is open free of charge to all blind or partially blind minors, resident in California, who have not completed the regular public high school course or its equivalent. Also those having completed a high school course who desire further work in music may attend the state school for a term of two years. The school provides regular public school courses from the kindergarten through the twelfth grade of the high school. Its teachers and supervising officers are specially trained for their work, and, in addition, nearly all have had regular public school experience and all keep in close touch with educational progress in other fields. The vocational work and music courses supplement the regular classes. Mentally backward children are given special attention.

This residential school is completely equipped with library facilities and with maps, globes, and models for effective objective instruction in all regular classes. The music department has equipment equal to that of a small conservatory of music. The shops are adequate for effective general hand training. Recreational facilities are exceptionally good, with emphases on the boy and girl scout programs and out-of-door activities. The residential provisions and medical care are essential to the school program and closely correlated with it.

Day Classes. The Los Angeles public schools provide classes for the blind through the elementary grades. Blind pupils of high school age as a rule attend a selected school where they are given continued guidance and special reading but are not segregated. The provisions for blind children in the Los Angeles public schools are among the

best in the United States. Younger children have exceptional advantages in the provision of library facilities, music, and recreation. In both Pasadena and Long Beach provision has been made for classwork for blind children, and both cities maintain a close correlation between the work of blind pupils and that of children in the regularly graded groups.

Rehabilitation. Those persons who lose their sight after school age or those blind who wish special vocational education beyond their school courses may receive aid and guidance through the Bureau of Vocational Rehabilitation of the State Department of Education, with offices in the State Buildings in Sacramento, San Francisco, and Los Angeles, and local agents in all of the large communities.¹ Work in vocational fields is also conducted by the field workers for the blind who teach handicrafts and at the shop centers—Oakland, Los Angeles and San Diego—of the Department of Institutions, where sheltered employment is provided.

Library. The State Library at Sacramento has a large collection of free literature for the blind in all embossed systems now in use. All books can be sent through the mails free and may be secured by any blind residents of the state or even by residents of other states on application. The Library maintains in addition a service for teaching Braille for adults and shut-in or preschool children, with a field teacher in San Francisco and one in Los Angeles.

SIGHT-SAVING CASES

Rise of Sight Saving

In earlier practice only those totally blind, or nearly so, were regarded as needing special education. Gradually it was realized that children who could not see the chalkboard, who were unable to read ordinary print with ease, and who could not carry on ordinary seeing tasks in comfort were handicapped to the point of needing special attention even though not totally blind. It was largely the pioneering work of the National Society for the Prevention of Blindness that brought about the recognition of the needs of this group and their partial segregation under improved conditions for their education. The National Society has also been the major agency in setting up standards for equipment and procedure for special classes in sight conservation. They have been instrumental, too, in urging legal provision for such classes.

¹ *State Services for the Blind in California.* Sacramento: California State Department of Education. April, 1938 (revised).

Harry D. Hicker, *Vocational Rehabilitation for Disabled Persons in California.* Bulletin of the California State Department of Education, Vol. X, No. 8, August, 1941.

State and City Provisions for Sight Saving

The public school system in New York City has the most thorough-going provision both for classes for sight saving and for training special teachers for such classes. A number of other state and city systems have established a more or less adequate organization for the setting up of classes and of standards of instruction. In most states provisions are either wholly lacking or vague beyond reason. In some the school law or school code sets up general provisions for handicapped children and makes special provisions specifically or by implication in a paragraph or subsection.¹

Local Services. In practice in California the local community largely determines its own setup and procedures. Thus, the Los Angeles public schools have made as complete and effective provisions for sight-saving classes as any school system in the United States. The San Francisco public schools also make excellent provisions for sight-saving classes. Cities of smaller population find it rather difficult to assemble a sufficient number of children with visual defects in one school to justify extensive classification and adequate equipment; but six cities in the larger population group, namely, Oakland, Los Angeles, San Francisco, San Diego, Long Beach, Pasadena, Fresno, San Jose, and Berkeley, have opened classes or set up individual instruction and have done acceptable work. The state is developing central machinery for guiding local communities in organizing sight conservation and encouraging the development of individual instruction or of classes on the basis of accepted standards.

Standards Relating to the Program

Standards have to do first with teacher preparation, second with rooms and equipment, and third with co-operative arrangements. Unless approved standards are fairly rigidly fulfilled, mistakes may be made that will vitiate the work done, and may render it more harmful than useful. These accepted standards which have been largely formulated and put into practice by the National Society for the Prevention of Blindness are as follows.

Teacher Training

In general, only those fully prepared for regular public school teaching should undertake sight-saving work. They should have at least two, and better three, years of experience in classes of normal vision. Then they should have courses in the anatomy and physiology of vision, with some clinic work under medical direction. The most

¹For general and specific provisions of the California School Code see Appendix.

important training is, of course, in the technical side of teaching and class management, including the use of the large-type typewriter and the technique of handwriting for conservation purposes. Teachers should be chosen and trained rather than trained first and then put into this special classwork.

Rooms and Equipment

The room chosen for a sight-saving class should be specially tested for lighting. No room which does not have a high level of natural lighting should be selected; and devices should be selected and installed to keep the lighting at a uniform level of not less than $12\frac{1}{2}$ foot-candles on the working surface, with due allowance for fluctuations of current and deterioration of lighting devices. In cases where eye defect is accompanied by photophobia or other hypersensitivity, the individual child should be singled out and given special attention, provided with dark glasses, seated in a favorable position, and the like; the group as a whole should not be made to suffer for the disability of one child. All equipment should be chosen with a view toward a unified and coherent program. Books must be of the sight-saving type such as those published by the Clear Type Committee of Upper Montclair, New Jersey. There are a few books from general lists with special type, large and clear, which may be used in individual cases; but, generally speaking, unless books are printed to conform to the National Society standards they should not be used. Typewriting, handwriting, and arithmetical notation as well as books, must conform to the approved standards. While room and equipment are vitally important, it should always be kept in mind that the program as a whole stresses a less exacting use of the eyes than is normally permissible and therefore involves a differentiation in the direction of introducing rest periods, attention to less exacting visual tasks such as gardening, and the extensive utilization of oral instruction. Class discussion and other forms of active oral participation are more useful and safer than reading to the class, or talks by the teacher, which tend to develop passivity and receptivity on the part of the pupils. The whole program should utilize objective teaching methods and center around activities.

Co-ordination of Procedures

Most important of all in any effective program of sight conservation is the assignment of pupils to regular classwork and the follow-up on the part of the special teacher to see that standards are complied with and work properly accomplished. The main purpose of keeping sight-conservation groups in the regular public schools is to have the children

do regular classwork as much as possible. Complete segregation for all work would defeat this purpose. Segregation has prevailed in work for those technically blind even in the public school classes and apparently cannot be avoided. In sight conservation, however, the chances for effective work are increased by close correlation of classwork and activity programs of children with reduced vision with those of children of normal vision. Segregated groups should not be tolerated except from the educational point of view when segregation is a means for the more effective education of any given group or when their education without segregation so seriously interferes with normal programs as to create a distinct loss in the whole school organization.

SOURCES OF INFORMATION AND SELECTED BIBLIOGRAPHY

General Sources of Information

The American Foundation for the Blind, Inc., 15 West Sixteenth Street, New York.

Maintains various divisions and departments touching all phases of work for and with the blind; acts as a general clearinghouse and publishes periodicals, books, and pamphlets, list of which may be had on application. Maintains a library in its New York headquarters, and is prepared to help in reference work and bibliographical service.

The National Society for the Prevention of Blindness, 50 West Fiftieth Street, New York.

Maintains services with respect to sight saving; offers list of pamphlets, books, and periodical publications on application.

Perkins Institution and Massachusetts School for the Blind, Watertown, Massachusetts.

Largest extant collection of printed material on the blind; library renders bibliographical service; its printed catalog, revised in 1930, constitutes in itself a very comprehensive bibliography.

The United States Office of Education, Federal Security Administration, Washington.

Serves as the national educational clearinghouse; maintains a research department and publishes *Transactions*.

Current Publications

Sight-Saving Review. New York: National Society for the Prevention of Blindness (50 West Fiftieth Street). Quarterly. \$2.00.

Contains timely articles on sight-saving technique, lighting standards, and the like; reviews and bibliographical notes.

The Outlook for the Blind. New York: American Foundation for the Blind, Inc. (15 West Sixteenth Street). Published five times a year. \$2.00.

Contains pertinent articles, reviews, bibliographical notes, and the like, covering the whole field of the education of the blind, their social welfare, legislation, aid to the needy, and the like. Founded in 1907 by Charles F. F. Campbell and has been published continuously for thirty-four years.

The Teachers Forum. New York: American Foundation for the Blind, Inc. (15 West Sixteenth Street). Published five times a year. \$1.00.

Covers technical problems in the teaching of the blind and partially blind.

Neighborhood Health. New York: Department of Health, New York City. Bimonthly.

Devoted to prevention of blindness and sight conservation.

Books and Treatises

BEST, HARRY. *The Blind, Their Condition and the Work Being Done for Them in the United States.* The Macmillan Co., 1919. (Revised Edition).

Excellent from a statistical and objective point of view; the most authentic work of its kind.

FRENCH, RICHARD S. *From Homer to Helen Keller, A Social and Educational Study of the Blind.* New York: The American Foundation for the Blind, Inc., 1932.

Primarily historical, but with a critical discussion of procedures, materials and methods used in the education of the blind.

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A compilation of contributions from outstanding authorities.

THE EDUCATION OF THE DEAF AND THE HARD OF HEARING

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INTRODUCTION

Two Types of Auditory Deficiency

Generally speaking there are two classes or types of hearing deficiency, namely, the deaf and the hard of hearing. From the standpoint of the education and training of children suffering from these deficiencies, the differences between them are definite and important. To ignore these differences is to defeat any attempt to solve the problems of education and to make an approach which may have far-reaching results in the future lives of those affected.

According to the definitions accepted by specialists in the field and by the National Association of the Deaf, persons are classified as deaf in whom the sense of hearing is nonfunctional for the ordinary purposes of life. This general group is made up of two types: the congenitally deaf—those who are born deaf; and the adventitiously deaf—those born with normal hearing but in whom the sense of hearing becomes nonfunctional later through illness or accident. The hard of hearing are those in whom the sense of hearing, although defective, is functional with or without a hearing aid. While the hard of hearing may also be classified as congenital or adventitious, and like the deaf are also suffering a physical disability, yet it is inadvisable, and for various reasons educationally disastrous, to place the adventitiously deaf and the hard of hearing in the same group merely because both types of cases still possess the power of speech and the possible use of language.

The Need for Segregated Training

The proper educational approach to the needs of persons handicapped by a hearing deficiency must take into consideration the means by which each of the two types, the deaf and the hard of hearing, may be instructed. Hearing is a very important avenue of instruction and mental approach, and for the child it is a vital means of growth and development. The deaf child has no usable hearing and consequently is shut off from that normal means of instructional approach. He is dependent upon and limited to the avenue of sight; for him all instruction must be presented to the eye.

On the other hand, the education of hard-of-hearing pupils should be undertaken through the ear since they have varying degrees of usable

hearing. The use of the hearing aid is of no practical serviceable benefit to the deaf, whereas the proper hearing aid is of valuable assistance to the hard of hearing. It is evident therefore that the deaf and the hard of hearing cannot be properly taught in the same class. Aside from the fact that the avenues of instruction are entirely different, it must also be borne in mind that hard-of-hearing pupils, taught in classes with the deaf, suffer a loss of hearing power since the ability to hear deteriorates from lack of use like any set of muscles or organ of the body which atrophy over a long period of idleness. Even though both the deaf and the hard of hearing are taught the art of lip reading or speech reading, the manner in which the average deaf child learns lip reading is entirely different from that in which the hard-of-hearing child learns. The hard of hearing learn speech reading to supplement what hearing they already possess, and to hold it in reserve as an ability on which to depend in case their residual hearing is lost entirely.

The ideal educational method of training the groups with hearing deficiencies is to organize separate classes for each, although at the present time, in most cities where there are special provisions made for such groups, the seriously hard of hearing are placed in classes with the deaf. Where no special provision is made for seriously hard of hearing, they are sent to the California School for the Deaf, a residential school maintained by the state, at Berkeley. While this latter arrangement is a better arrangement than to leave them without special care, it is obviously wrong from the standpoint of both the deaf and the hard of hearing. Where these two groups are segregated, they must be given the necessary care and training suited to the separate needs of each. Such segregation would clear up the confusion in the minds of school authorities, parents, and citizens as to the proper care of the deaf and the hard of hearing. It would also emphasize the differences of these groups from an educational point of view.

THE DEAF

Proportion of Deaf Persons in the Whole Population

Estimates differ as to the total number of deaf children in a given population, for it is very difficult to obtain reliable statistics.¹ There are between 1,000 and 1,200 deaf children of school age in California and approximately 825 are under special instruction. There are many seriously hard-of-hearing children in this number as approximately 40 to 50 per cent of those in the day schools and special classes is made up of the seriously hard of hearing. In the light of these figures, it is evident that there are some 200 to 400 deaf children (this

¹ Harry Best, *The Deaf*. New York: The Thomas Y. Crowell Co., 1914. This author estimates that there is one deaf person for every 1500 population. One-third of these deaf persons are of school age.

estimate does not include the hard-of-hearing children) in various sections of the state who are not under special instruction.

Kinds of Deafness and Causes of Deafness

Deafness is a physical defect and so far as lack of hearing is concerned, it is the same whether the deafness is congenital or adventitious. These two types of deafness are designated according to the time and manner of the onset of the deafness. A deaf person is designated as either congenitally or adventitiously deaf, terms which indicate the time and the manner of deafness. Thus deaf persons who are grouped according to ability to speak, to lip-read, or to use language, are classified in terms of accomplishment or ability and not according to physical disability. This last classification is illogical and incorrect.

Approximately 35 out of every 100 deaf children are congenitally deaf—born deaf. They have never heard spoken language; their speech organs are intact yet incapable of natural use because of lack of hearing. They must be taught how to speak.

Children who are born with normal hearing and who become deaf either before or after reaching the age of connected speech and connected language are adventitiously deaf. These children cannot be classified as hard of hearing. About 65 per cent of all cases of deafness are acquired or adventitious. Statistics indicate that 40 to 50 out of every 100 adventitiously deaf children become deaf in infancy or preschool life. This indicates that the remaining 50 or 60 became so during school life. These facts are important in the planning of educational opportunities for the deaf as a group. These differences in the time of onset of deafness account for better achievement in speech, lip reading, and scholastic attainment by some deaf children.

There are many causes of deafness. Dr. Harry Best enumerates the chief causes in terms of the following percentages:

Congenital	33	per cent
Adventitious		
Scarlet Fever.....	11.1	
Spinal Meningitis.....	9.6	
Brain Fever.....	4.7	
Catarrh	3.6	
Measles	2.5	
Typhoid Fever.....	2.4	
Colds	1.6	
Malarial Fever.....	1.2	
Influenza	.7	
Other causes ¹	28.9	

100 per cent²

¹ A fall does not usually cause deafness, although it is commonly listed among the causes.

² Harry Best, *op. cit.*, p. 18.

Organization for Instruction

A broad constructive policy for the education of the deaf and the hard of hearing in California was formulated and undertaken in 1928 by the State Department of Education. At that time a Bureau for the Education of the Deaf was established within the Department with the Superintendent of the California School for the Deaf at Berkeley as the Chief. The function of the Bureau is to co-ordinate and unify all efforts pertaining to the instruction of the deaf and the seriously hard of hearing. The Chief advises on problems related to the education of the deaf and the hard of hearing; at least twice a year he visits each special school and class; in addition he counsels and advises in matters pertaining to the hard-of-hearing children in public school classes. He assists the Commission of Credentials in passing on applications for all types of credentials for teachers of classes for the deaf.

Free instruction for deaf children in California is provided at the California School for the Deaf at Berkeley, a residential school maintained by the state, and in special schools and classes in certain city school systems such as Eureka, Sacramento, San Francisco, Oakland, Fresno, Los Angeles, Pasadena, Long Beach, and San Diego. About 335 deaf children are enrolled in the California School for the Deaf and about 490 are enrolled in special classes.

The law clearly states that all deaf children who are physically and mentally normal and of good moral character, between the ages of five and one-half and twenty years of age, must be in attendance at a suitable school.¹ It is permissible under this law for school districts that provide special classes for deaf children to admit pupils as young as three years of age.² Admission of children to these classes at such an early age has disadvantages as well as advantages. If an entire class of this age is organized and all necessary arrangements made, instruction and training can be successful but not otherwise.

To insure school attendance and to aid in checking the whereabouts of deaf children, the law makes it mandatory for all physicians, otologists, and school officials to report all cases of deaf children or of children with a serious hearing defect to the Superintendent of the California School for the Deaf.³

Early recognition of deafness is perhaps the most important single factor in the education and training of the deaf. Probably no type of handicapped pupil represents a greater problem for instruction than do the deaf, for these children are without hearing and they must achieve the art of language by means of other senses than that

¹ School Code section 1.500.

² School Code section 3.613

³ School Code sections 1.507-1.509

of hearing. Often the child is kept too long at home and frequently years of opportunity are lost. Early recognition of the handicap and the report of cases to the proper state authority offer a way to extend full instructional opportunity to very young children.

It should not be difficult to recognize the deaf child, for he is usually characterized by an inability to speak and to follow commands or directions, by inattention to his surroundings, and usually by a rather stolid facial expression. In spite of some superficial like symptoms, the deaf child should not be confused with the mentally deficient. The chief characteristic of the deaf child is that he does not hear nor interpret spoken language. A child can react to noise, sound, or even a combination of sounds, and yet be deaf. The true test must be the interpretation of spoken connected language addressed to the ear.

The early detection of deafness by the doctor, the parent, or the school teacher, makes it possible to send the deaf child to school at the proper time, thus avoiding sad and tragic later experiences.

Objectives of Instruction

The final aim of all education of the deaf is a normal adjustment to life. This adjustment should be sought by means of formal educational training to the completion of at least the ninth grade, character education, and vocational training. The handicap of deafness is so serious that the educational attainment of the deaf cannot be so complete as that of the child with normal hearing. There are differences of ability among deaf pupils, but the formal education for the deaf should be at least the equivalent of junior high school with further opportunity provided for the pupils who can do more. The average length of time required to reach this goal is twelve to fifteen years.

In addition to this formal instruction every effort should be made to build a strong personality and character. In fact, the training for character should be the cornerstone of all education for the handicapped. It is within the grasp of all and should be emphasized as a vital part of their lives. Policies, procedures, and environment should be shaped with this goal in mind.

The adjustment of a deaf child is not complete without a very carefully planned and selected course of vocational training. His success, future welfare, and security depend largely on his ability in and knowledge of a trade. Usually, because of the nature of his handicap, he finds the semiprofessional and professional occupations closed to him. His best, and perhaps his only, opportunity is a trade and more especially a trade that does not require the use of hearing. Therefore vocational training must have an important place in any course of study for the deaf.

The use of language is an indispensable tool for the realization of the final objectives of education. Along with the intensive training in language to afford him an ordinary ability to use and comprehend English, every deaf child should be given a full opportunity to learn to read lips and to speak intelligibly. There are several factors to be considered in this connection, but everyone who can obtain this kind of training through these means should do so. For the future happiness and welfare of the child, however, it should be kept in mind that an educated mind and a normal adjustment is the final goal, and the art of lip reading and the ability of intelligible speech are merely means to an end. Furthermore it is a mistake to believe that the deaf child who is incapable of mastering lip reading and intelligible speech is both mentally slow and uneducable. Some deaf pupils with bright minds are very poor lip readers when given every opportunity to learn. Other pupils with limited education are found to be good lip readers. These facts are important to know.

Organization of Special Schools and Classes

A residential school, special day schools, and special classes within the regular school, are maintained in California to educate the deaf. It is the exceptional deaf child who can learn successfully in a regular public school class. Few, if any, can do so, and such a practice is usually most unsatisfactory. The deaf child, in trying to compete with the normal child, is made to realize his great differences and naturally develops a feeling of inferiority.

Instructional practices differ in the special day classes and in residential schools for the deaf. One method of instruction and only one is followed in the special classes and day schools. Here the pupils are educated through speech and lip reading. The use of finger spelling in classes or sign language on the playground is absolutely prohibited in these classes and schools. A teacher of the deaf must have thorough special technical training in teaching the deaf child, but the ideal teacher is one who is qualified as well to teach regular public school classes. There have been cases where inadequately trained teachers have been placed in charge of classes of deaf children. It is likewise true that a teacher trained only to teach the hard of hearing is not capable of teaching the deaf. Moreover a teacher of the hearing child cannot properly serve the deaf. Instruction methods in the residential school vary to fit the ability and capacity of the child. Teachers at the residential school must have thorough technical training for the teaching of the deaf before they are engaged as members of the staff.

Special education facilities for the deaf were established early and centered at residential schools. The first school of this kind was at

Hartford, Connecticut, in 1817. State schools for the deaf are to be found in all the states except Wyoming, Nevada, New Hampshire, and Delaware. California established the residential school in San Francisco in 1860. Later in 1867 it was removed to Berkeley.

The residential school is supported from state funds. All necessary care and service such as board, medical care and health protection, supervision out of school hours, and character-building activities and organizations are provided in addition to academic instruction and vocational training. These services are all necessary to the full development of the deaf child. Every deaf child between the ages of five and one-half and twenty years who is a resident of California, otherwise physically normal, educable, and morally fit, may be admitted without cost to the school in Berkeley. These children spend their summer vacations at home, and may go home for week ends each month if they live within a reasonable distance.

The first day class for the instruction of the deaf was organized at Boston in 1869. Gradually other cities organized the day classes and schools offering local opportunities for children handicapped by deafness. There are various reasons for the establishment of special schools and classes for the deaf. One may be that a single method of instruction—oral training and lip reading—is followed. Also deaf children attending such classes and schools can live at home instead of going away to a boarding school. The children go back and forth each day. In many instances because of the distance, transportation by bus or taxicab is furnished. In a few places where distance between the home and the school is too great or where the child may even live in another city, arrangements are made between cities for the admission of the child, and the pupil may board near the school.

Classes for the deaf, because of the technical requirements and because of the seriousness of the handicap, must necessarily be small. The standard followed by most schools as to number in a classroom is ten, but the ideal number of pupils in a class is eight. It is permissible and justifiable to have eight or nine in first-year or beginning classes at all times. To have classes made up of less than this number increases the expense and is a matter for the school authorities to decide.

It is difficult to realize satisfactory school accomplishment where there is only one class of deaf children because of the serious problem of classification. The greater the number of classes or the larger the day school, the better will be the classification and the school accomplishment. In some cities a single class for the deaf is listed as a day school, a practice that is confusing.

Every day school, consisting of fifty children or more, should have a supervising teacher in charge of the work. A special class or a group of special classes without supervision and expert guidance cannot as a rule enjoy satisfactory accomplishment.

It is absurd to expect the deaf child to answer the same grade requirements and to reach the same educational levels in the same time as those set up for the hearing children in the public schools. This is not being done and can never be done by the average deaf child. Only in very exceptional cases can it be done. The children must have special foundation work in language, and a great deal of time and effort must be given to speech and lip reading. The course of study to be followed in a day school should be so set up as to suit the requirements and possibilities of the average deaf child. The average deaf child cannot cover the grade work of the first six grades in less than nine or ten years. Every deaf child because of his serious lack in language ability and the consequent handicap in education should be allowed a minimum of at least twelve years of schooling. To those who can benefit by it, fifteen years would be justifiable and most worth while. This might bring the average child up to about a junior high school level in accomplishment.

Vocational Training. Residential schools for the deaf early recognized the great need of vocational training for the deaf. In fact, they were the pioneers in this phase of education and training. Schools for the deaf organized and established vocational training in 1823. Every state residential school has a vocational department, which is a very vital part of the deaf student's full training. The children in the special classes of public schools and also in public day schools should have this training but many do not. The usual arrangement in the public schools is to send the deaf into the vocational classes for children with normal hearing. This is not the best plan but under the circumstances it is the next best. Then too, the average child in the residential school receives vocational work from one to two hours a day, whereas the average child in the special classes in the public schools, if these provisions are available, might receive so many periods a week. These arrangements vary in some city school programs.

Because of his loss of hearing, the deaf person must earn his living by a trade or similar occupation. The numerous and varied opportunities for the average hearing graduate are not for him. Any task, endeavor, or occupation calling for the use of hearing is impossible for the deaf student. Therefore it is essential that he be given practical training in trades and that these trades be so selected as to offer him the greatest opportunity for employment. A school for the deaf with-

out a well-organized vocational department is not answering the needs of the deaf child. Some way should be found to give every deaf student vocational training at least during the last three or four years of his school period.

The Bureau of Vocational Rehabilitation and Training. In every large city there are representatives of the Bureau of Vocational Rehabilitation. The services of this Bureau are most important and should be sought not only by those in the work with the deaf, but also by the deaf themselves. The public school officials in cities where there are special classes or a day school for the deaf should make use of these available services wherever and whenever possible. The residential school, despite the fact that training in certain trades is given, should maintain close contact with the Bureau and should co-operate in every way so as to make every possible provision for the deaf graduates. Further training in a particular vocation may be necessary, and advice and instruction can be given by these agencies. Furthermore, the matter of contact with industry and business for placement is of the most vital importance. These services again can be had through the Bureau. Last, through this necessary co-operation of the school and the Bureau, there should be a very definite policy of follow-up of every graduate of the special public school classes for the deaf and of the residential school.

The deaf have been trained with success to take up the following trades: printing, linotype operating, press work, engraving, cabinet work, upholstering, photography, photoengraving, retouching, baking, bookbinding, shoe repairing, cleaning and pressing, barbering, gardening, dressmaking, cosmetology, power-machine operation, business-machine operation, painting and decorating, sign painting and lettering, and laundering. There are still other lines of endeavor but this affords one a general idea of the type of training best suited to the deaf. From time to time certain trades that at one time were good for the deaf become obsolete. It should always be remembered that a well-trained and educated deaf graduate can earn his living and become a self-supporting and law-abiding citizen. Furthermore, there are poor workmen among the deaf as well as among the hearing. The deaf should not be judged by one or two individuals.

Housing Facilities and Equipment

Special classes for the deaf are usually housed in a regular public school building. In large cities where the number of deaf children is considerable, these classes are often situated in separate buildings. San Francisco and Los Angeles have separate schools for deaf pupils as do many cities of similar size throughout the United States.

The housing of deaf children in buildings with other children is a practice followed where there are only a few such children. It is sometimes maintained that a deaf child becomes more nearly normal if he goes to school with hearing children, learns to play and associate with them. Authorities are not agreed on this point.

The one class or school for the deaf in any city should probably be centrally located, since it is for the benefit of all such handicapped children living in all sections of the district. Fatigue, resulting from long-distance traveling, affects the deaf child just as it does the hearing child, perhaps more so. Such effects upon his well-being must be considered, even though most cities furnish transportation to and from the class or school.

In the assignment of rooms for special classes for the deaf in the regular public school buildings, careful consideration should be given to the special needs of these children. To have one or two special classes for the deaf assigned to a school places an added responsibility upon the school principal. However, the principal should endeavor to learn all she can about favorable conditions for carrying on this responsibility. It goes without saying that deaf pupils should never be assigned to rooms considered unsuitable for hearing pupils. Special classes should not be located in basements, in out-of-the-way places, or in small rooms never intended for a classroom. It is far better for administrators to go to the other extreme and assign deaf pupils to a large room with the best exposure for light and with adequate physical equipment for the average classroom. Because the deaf are wholly dependent upon their eyesight, their vision should be protected in all possible ways; and the best rooms for light should be assigned to deaf pupils.

Because of the great amount of individual instruction, the number of pupils which should be assigned to classes for the deaf is definitely limited. This number is comparatively small when considered in terms of regular classes. Because, however, of the peculiar requirements for these special classrooms the average room space should not be less than 26 feet by 20 feet. The floor space for the beginning classes—first- and second-year children—should be larger, measuring 35 feet by 20 feet. Young children in these classes should have a place to nap and to carry on certain school and play activities. Furthermore, the average classroom for the deaf requires more physical equipment than that for the regular group of children. The chalkboard space should be sufficient to afford writing space for the teacher and for each member of the class. There should be sufficient area above the chalkboard and in other parts of the room for the display of picture material used in descriptive work and language teaching. There should be hook rails

and hangers for the use of story charts and for speech charts. There are certain complicated techniques necessary in the teaching of language to the deaf, and consequently improvised stands and forms for the holding of various devices for the teaching of language forms should be installed. Adequate closet space for storing of material should be furnished. The standard table and desk equipment is satisfactory. Because of the teaching of speech and lip reading, it is essential in each classroom to provide additional chairs arranged in a semicircle in front of the room. A great deal of the work in speech and lip-reading instruction is carried on while the pupils are seated in this semicircle of chairs.

There should be adequate electric outlets in the baseboards because of the important place of visual education in this special field. Every opportunity should be taken to use visual devices in work with the deaf child. Furthermore, there is a place for the proper use of group-hearing aids. This use must not be misunderstood, however. The purpose of the group-hearing aid for a class of deaf children (not hard of hearing) is to better and improve the speech and tone of voice and at the same time to serve as an adjunct to lip reading. The use of these aids is possible because 80 per cent of all deaf children possess a certain degree of sound perception (not actual or practical functional hearing) which oftentimes can be utilized in speech training.

THE HARD OF HEARING

Definition of the Term

An individual who experiences some degree of difficulty in hearing and understanding connected language under normal conditions is hard of hearing. In most cases, however, such a person can hear, if the source of the spoken word is brought within his range of hearing. It is well to avoid confusion in the use of terms by designating only those persons who suffer a hearing defect but who are able to hear as hard of hearing. For example, a person who loses his hearing at sixteen years of age after enjoying the full use of the faculty for fifteen years should be designated as deaf. It is incorrect to refer to him as hard of hearing merely because he possesses good ability in speech and a good education. He has no hearing and is therefore properly known as deaf. The term "hard of hearing" for the person with a hearing defect is more acceptable than the term "deafened."

Proportion of Hard of Hearing in Total Population

During the last decade hearing tests have been given and surveys conducted in various sections of the country as the need to improve

the condition of the hard of hearing has been generally recognized. Practically every large city has conducted hearing tests for school children. Figures taken from these surveys have sometimes been misleading and exaggerated, for the results have been published without indicating the numerous factors that often have a strong bearing on the results. These findings indicate that from 1.5 to 15 per cent of the school population of a community have a hearing defect. In contrast to this finding, most examiners agree that 1.5 to 5 per cent of a school population are found to have a hearing defect and that the percentage of the whole group in need of special instruction and care amounts to from .5 to 3 per cent. These percentages are affected by various factors. For instance, children coming from homes of a low income level, may lack medical care when it is needed, and the other requisites of healthful living; thus this group would show a high per cent suffering from a hearing deficiency.

A conservative estimate would place the number of adults of the population suffering from considerable hearing loss at about 5 per cent. Children today have more medical attention than that given to children in a past generation and it is likely that the number of adults with hearing defects may be slightly greater than that reported for children of the present day.

Classification of Cases of Hard of Hearing

While many individuals who are hard of hearing are congenital cases, having suffered hearing deficiencies since birth, a greater number of hard-of-hearing persons represent acquired or adventitious cases. The condition in the more serious congenital cases borders on deafness; and if it is not discovered in time, the person is often classified and treated as deaf. The ages of persons who acquire a serious hearing deficiency range from babyhood to old age. Naturally the younger the person is when he becomes hard of hearing, the greater the handicap. Therefore it is necessary that all school systems should provide periodic tests in hearing for children to insure early detection of hearing deficiencies, and the proper medical care and attention. Every effort should be made to realize these periodic hearing tests for every child in the country. School Code section 1.120a permits the governing boards of school districts to arrange for the periodic audiometric testing of all school children. All children do not suffer the same degree of loss. Also it is possible for one child to show a greater percentage of loss on the chart than another, and yet retain a greater degree of usable hearing. Generally speaking, however, the greater the percentage of loss, the greater the actual difficulty in the use of hearing.

Discovery of Cases of Hard of Hearing

Children who are hard of hearing show certain symptoms which may be detected by careful observation. Once these symptoms—inattention, defective speech, day dreaming, inability to follow directions, retiring behavior, poor spelling, poor language construction, constant repeating, apparent surliness—are detected, further tests, including audiometric, and connected spoken language, should be administered. If the child with a hearing defect is neglected, he may well become a behavior as well as an educational problem. The hard-of-hearing adult shows many of the same symptoms as the child, although in cases where the defect in hearing appears late in life, the person does not have the symptoms of poor spelling and poor language construction. Such an adult becomes retiring, tends to withdraw from the group, and may follow a pattern of behavior that makes him a social problem if other attitudes are not fostered and developed. Early detection and immediate action following discovery are necessary if a hearing deficiency is not to become an educational and economic handicap.

Every school child should be given periodic audiometric tests. In all school systems these tests should be administered annually, biennially, or at least once every three or four years. In small communities, provision for these tests should be made through county school administrators. Every school child who has recently recovered from such an illness as measles, scarlet fever, and whooping cough, should be required by the school authorities to present a report showing that his hearing has been tested along with the statement of his recovery from the doctor. If the hearing of public school children were examined regularly, better physical conditions, greater happiness, more satisfactory school accomplishments, and the saving of time and money would result. Many cases of defective hearing can be detected and the condition arrested in time through proper medical care, if a regular procedure of hearing tests is carried out among public school children. Such attention is necessary to prevent permanent and even progressive hearing defects. Furthermore, in cases where defects are not preventable, early discovery makes it possible to take immediate steps to aid the children who are suffering from this handicap. Determining the point at which hearing loss is said to begin is difficult. A person suffering a nine decibel loss should undergo further examination.

Groups of children are usually tested with either a 4B audiometer, or perhaps with the older-type 4A models. This device is a combination phonograph and set of earphones. The tester's voice comes from a record played on the phonograph. The children hear the voice through earphones or telephone receivers attached to the phonograph.

Each instrument may have as many as 40 outlets. This type of test is used more or less as a sifting process. If certain children in the group test are found to be deficient in hearing, they are then tested individually by means of another type of audiometer, either of the 2A or the 6A type, which tests the person's ability to hear tones of different pitches. Trained persons should operate the audiometers and interpret the test results. Probably a valid conclusion as to the extent of the hearing defect cannot be reached by means of the audiogram alone. The hearing of the individual child should also be checked after consultations with his classroom teacher, his parents, and considerable observation of his behavior. Some children may show a considerable degree of hearing loss on the audiogram, yet have a more usable degree of hearing than a child whose audiogram is more favorable. In all cases of hearing loss, the tests by mechanical apparatus should be supplemented by test in the hearing of connected spoken language. Audiometric testing can only be successful under practically perfect conditions. The Bureau for the Education of the Deaf has in preparation a series of such bulletins explaining the procedure of such testing.

Education and Training

Every school child who suffers a hearing defect serious enough to retard his education and progress should be given every opportunity through special provisions to overcome this handicap. This special help merely fulfills the community's responsibility to its children.

The hard of hearing are classified in the three following general classes according to degree of loss of hearing: (1) those whose defect is noticeable but very slight; (2) those whose defect is more than slight and which causes some difficulty in certain phases of school work; (3) and those whose defect is rather serious and which is very evident in the child's speech, behavior, and school accomplishment. These varying degrees of hearing deficiency are to be found among all hard-of-hearing children wherever they may be. It must be remembered, however, that all still possess usable hearing.

Members of this first group should be given annual checkups in hearing and physical tests as a precautionary measure. Hearing deficiency often has a very close relationship to physical health. Then too, it is understood that in general, a hearing loss becomes greater over a period of time. Those who can be classed in this group should be given lessons in lip reading or speech reading at least once a week. If time permits, two or three lessons a week is better. The lesson should last at least thirty minutes. Pupils in this group should continue with their regular classes, but should be given a seat near the teacher. In

high school, credit should be given for lip reading just as credit is given for any other subject.

Children in the second group with a hearing defect sufficiently serious to interfere with success in school are found to need not only instruction in lip reading, but also special coaching in subjects which they find most difficult. Therefore, it should be arranged to give as many lessons in lip reading as possible, and as many periods as possible for special coaching in certain subjects should be set aside. These hard-of-hearing students should continue to take work with their regular classes otherwise.

The last group is made up of children who are seriously hard of hearing. These children cannot carry on work in the regular classes. They need more than lessons in lip reading. They require special provision in every way and must be instructed as a class under a specially trained teacher. Their time schedule would follow the regular class schedules. The hearing deficiency has not only held them back in accomplishment, but has caused much confusion in the use of English and in spelling. Often their speech and tone quality have suffered as well. Pupils with this degree of hearing defect should be placed in classes for the hard of hearing only. They continue to retain usable hearing which can be reached under proper conditions and arrangements and therefore should be taught through the ear. They should not, as is so often the case, be placed in classes for the deaf. Above all they should not be left in the regular classes and made to carry on under such insurmountable conditions. They soon become problems in every way, and if overlooked too long, become hopeless so far as teaching and instruction are concerned.

Every city that has as many as eight seriously hard-of-hearing children should establish a special class for them. Mentally slow and retarded children with apparently normal hearing should never be placed in these classes. All larger cities should arrange to organize this necessary work to take care of this type of the hard-of-hearing child. Those found in the small cities and rural areas naturally make up a very small and widely scattered number. Trained teachers of lip reading should be engaged by public school systems in cities to provide special training in lip reading for the hard-of-hearing children who fall in groups one and two. There should be the same provision arranged for all such children found in the rural districts. Those who fall in group three and can be classified as seriously hard of hearing present a more difficult problem. In the cities of greater school population, full classes should be organized; and whenever possible, trained teachers of the deaf placed in charge because of their full and complete training in the technique of language which is so essential. In the

rural school districts where the seriously hard of hearing would be few and scattered, a trained teacher of lip reading might be found who could travel from place to place to render these special services as often as could be arranged. The next possible solution would be to send the seriously hard of hearing to a special class or day school in a near-by city or to the residential school at Berkeley. The best solution because of certain factors would be to establish a residential school somewhere in the state for the seriously hard of hearing only. Thought and study should be given this matter.

Classes for the hard of hearing should be located in school buildings where there are classes for the regular children. This procedure is more justifiable with the hard of hearing than in the case of the deaf children. Then again if the number of classes warrants the step, there should be no opposition to a special and separate school building for the hard of hearing. Either arrangement is satisfactory.

If there is no great variance in classification, the average class of hard of hearing should have between eight and fifteen pupils.

The physical equipment in general should be the same as found in the regular classrooms. It must be remembered that the plan of procedure in teaching should be the same as that followed in the regular classes.

In every instance the classroom should be equipped with a suitable and efficient group-hearing aid, with sufficient outlets to answer the needs of the class. The major part of the instruction and teaching should be through the ear as it is the most normal approach. However, certain periods of the day should be devoted to the teaching of lip reading, an exercise that cannot be overlooked. Likewise, time must be found to carry on speech correction because it is natural to find speech defects among hard-of-hearing children. In most cases of defective hearing, the defect becomes worse as time goes on. Therefore, it is always good procedure to endeavor to give the individual the ability to read lips before the hearing is completely lost.

Group-hearing aids can be purchased or can be made by the radio section of the vocational department of the local school system if such services are available. The group aid is beneficial largely when the class is with the same teacher all day or a major part of the day. It is more efficient and more economical than the present available type of individual hearing aid.

If the individual has a degree of hearing deficiency which permits him to profit by attending regular classes in addition to his regular instruction in lip reading, he can be helped by the use of a suitable and proper portable hearing aid. Persons differ in their type and degree of hearing loss. Therefore, it is necessary for a person to seek

the hearing aid that best suits his type and degree of hearing deficiency. The same aid may not satisfy two individuals. Hearing aids have been greatly improved over the last few years and as a result there are several very good hearing devices from which to choose and select. As it is necessary to test the eye and then prescribe glasses for correction, so it is with the ear in prescribing a hearing device.

Techniques for finding the best type of hearing aid for the individual case have not yet developed to the point where individual prescriptions are available to the average person. There is some indication that individual prescriptions are possible, however, and if these prescriptions can be generally available and the cost reasonable, hearing aids will have a more general usefulness for the average hard-of-hearing person.

The use of the individual hearing aid by the average hard-of-hearing child under twelve years of age has not been found very satisfactory. The child is too young to appreciate the importance of its use. Likewise, the aid is not given proper care. All in all, experience indicates an unsatisfactory result among young children. For young hard-of-hearing children, a desk type of aid might be installed for his use in his home.

Furthermore, it must be kept in mind that the same degree of hearing defect in a young child is far more serious and detrimental than that found in an adult. The procedure in schools should be: test, find and endeavor to remedy and to prevent the deficiency. Following this, necessary steps should be taken to help those whose loss indicates definitely the need of special attention as already described in the preceding paragraphs.

Vocational Training. The need of vocational training in carefully selected occupations is as important in the case of the hard-of-hearing children as it is in the work with the deaf. This vital provision cannot and must not be overlooked. Although the individual still possesses usable hearing and is far better off in this sense than the deaf, nevertheless he will experience in many instances the same difficulties and problems in seeking employment. There will be exceptions to be sure, but the needs of the average hard-of-hearing student must be considered. Therefore the same trades and occupations which offer opportunities for the deaf are also suitable for the hard of hearing. It might be said the field of employment might be somewhat broader for the hard of hearing. For example, there should be opportunity for typists who, with the use of a suitable hearing aid, could do all the necessary typing where the dictation and similar work are done by dictaphone. Straight typing from a copy can also be done by trained typists regardless of the degree of hearing defect.

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THE EDUCATION OF CRIPPLED CHILDREN

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INTRODUCTION

Development of Special Facilities for Crippled Children

Status in the Past. Twenty-five years ago very little was being done in the way of providing special educational facilities for children so seriously crippled that they could not attend the regular school and fit into its curriculum and activities. The possibility of a school program to provide special attention to meet their individual needs was perhaps discussed, but such a program was rarely put into practice. The concept that provision of special facilities for an exceptional few was a legitimate function of the public school was far from being generally recognized. School superintendents and principals, absorbed in the larger problem of mass education, were apathetic to the problem of education of the crippled child. Even when the problem was considered, the relatively high cost of extending education seemed to make the provision of special facilities prohibitive. Moreover, there were no teachers trained for the special program and no training facilities for their specialization.

Recent Findings. Provision for these special education facilities is recent and the movement has encountered many difficulties; yet the progress has been considerable. In a study made during 1937, it was found that 17 of the 23 cities in California with a population of more than 25,000 reported special education activities for crippled children. In addition, 10 cities in the population group 10,000-25,000 and the offices of 8 county superintendents of schools reported similar activities, while 17 communities of less than 10,000 population reported home instruction only.¹ Most of the instruction noted was in the elementary grades, but in 17 instances secondary education was included. The number of teachers employed was 121 full time and 44 part time. The number of crippled children enrolled was 3,146, distributed by type of instruction as follows:

In school classes -----	946
In hospital-school classes -----	344
Receiving home instruction -----	976
Hospital bedside instruction -----	880
 Total -----	 3,146

¹ H. D. Hicker, *Teacher Personnel and Enrollments in Special Schools and Classes for Exceptional Children in California Public Schools*. State of California Department of Education Bulletin No. 6, June 15, 1938, pp. 6-7.

Further Provision Needed

This record for the care of crippled children is excellent, but there remains much to be done; 29 cities of over 10,000 population have no special classes for their crippled children, and it is conceded that in the smaller communities and in the rural districts there is still a distressing lack of adequate educational opportunity for these children. The extent of the problem is not fully known. An indication of its size, however, is found in the fact that individual data on 9,530 crippled children were recorded in an admittedly incomplete survey in 1937.¹ Another significant fact is that two-thirds of the service of special education in the state is carried on by the two cities Los Angeles and San Francisco, whereas the combined population of these two cities is only one-third of the total population of the state. There is nothing to indicate that the need for special service is not proportionately great elsewhere in the state. Discovery of crippled children in the rural areas is the first step in bringing about recognition of the problem and attention to the need thus brought to light. The benefit, both to the individual and to the community, of providing special service for those who require it is no longer doubted. Extension of such service to reach every crippled child in the state and improvement of the program already established are kindred problems of increasing public interest.

Crippled Children Who Shall Receive Attention

The crippled child, in the broad sense of the term, is one who has a defect which causes a deformity of, or an interference with, the normal function of the bones, muscles, or joints, whether due to congenital impairment, disease, or accident. To indicate eligibility for admission to special classes the term is used in a narrower sense to indicate those crippled children who, by reason of their impairment, "cannot receive the full benefit of ordinary educational facilities."²

Both the broader and the more restrictive definition should be kept in mind in dealing with these children. Certainly, the more restrictive use of the term should not have the result of excluding from special consideration those ineligible for special classes but who nevertheless have handicaps to overcome. Surveys and studies indicate that approximately one-third of all crippled children need special school or special class facilities; the remaining two-thirds can attend regular schools and benefit by regular instruction. This does not mean, however, that the children in the larger group do not need individual attention at the hands of the regular class teacher; they may require

¹ H. D. Hicker, *Survey of Physically Handicapped Children in California*. State of California Department of Education Bulletin No. 8, July 15, 1938, p. 13.

² School Code section 3.606

a rest period, or modified exercise; they certainly require special aid in social adjustment, as well as educational and vocational counseling which will enable them to make the most of their abilities in preliminary preparation for suitable employment. This phase of educational development has in the past often been overlooked, but with the current trend toward consideration of individual differences and with the development of the field of special education, regular class teachers and administrators will have a better concept of the needs of the handicapped child in their classes and a better knowledge of how to meet those needs.

Suggested Terminology. The term *orthopedic class* is suggested as a much more desirable designation than "class for crippled children," for the reason that it connotes the function of the class rather than the fact of disablement of its members.

THE SPASTIC CHILD

The word "spastic" is commonly applied as a general term to include the cerebral palsy group of cases of true spastic paralysis, and also the athetoid group. Spastic paralysis is marked by rigidity of the muscles and heightened tendon reflexes. Athetosis is marked by involuntary slow vermicular movements of the hands and feet. The two types are about equal in number. Two other general terms often used indicate characteristics common to both groups: The first, "motor defective," implies the lack of muscle control (muscular incoordination) present in all cases; the second, "birth injured" (or "birth palsied") implies that the cause is usually a brain lesion at birth. Other common characteristics are extreme speech difficulty and drooling. Although physical treatment differs for the two groups, surgery sometimes being indicated for the true spastic but rarely for the athetoid, and relaxation being especially the chief requirement in the treatment of the latter, the two types are usually grouped together under the general classification of spastic children and will thus be considered here.¹

The former quite general belief that spastics are almost invariably mental defectives has been disproved. The unfavorable stigmata of spastics may conceal a normal or even a brilliant mind. Tests should be used to determine educability. The tests should obviously be non-verbal in type. Determination of educability is often difficult, but skilled and understanding application of common sense often reveals hidden possibilities, or at least indicates ability to profit by instruction.

¹ "Spastic Paralysis (Cerebral Palsy): Selected Bibliography," Oakland, California; Spastic Children's Society of Alameda County (4120 Sequoyah Road), n.d. (mimeographed).

Spastic children without doubt present the most difficult problem in the field of work for crippled children. True, there are various degrees of severity of the condition among them, ranging from complete helplessness to the status of being only moderately handicapped. The majority, however, need special attention usually not available in special classes for other crippled children. For this and other reasons their segregation in a class apart, under a specially qualified and understanding teacher and with physiotherapy treatments available, is advocated, whenever this is possible.

It has been argued that such separate classes will deprive these children of the broadened social contacts and the urge for accomplishment which enrollment in a class with nonspastics would bring. Competition with less handicapped pupils in mixed grouping, however, is likely to result in overstimulation which may be harmful both emotionally and physically. Moreover, the nonspastics in a mixed class would probably be retarded in their progress by the presence of any considerable number of spastics who must necessarily demand a disproportionate amount of the teacher's time. Probably best results will be obtained through the policy of separate grouping until such time as the individual spastic has gained sufficient proficiency in speech, muscular coordination, and scholastic attainment to justify transfer.

The policy of separate classes for spastics cannot be made a universal rule. In small districts the number may not justify such procedure. In other districts there may be too great diversity in age, condition, etc., to justify grouping all spastics together. Each situation should be analyzed and the best possible arrangement made to fit the circumstances. In one instance a district solved the problem by sending its few spastics to a special class for spastics established in another district.

Recognition of the advisability of segregated class instruction for spastics, as well as of the need for early training, is found in a provision passed by the California Legislature of 1939 permitting their enrollment in special classes for spastics (not the usual orthopedic classes) at three years of age.¹

Obviously, standards set up for other orthopedic classes will not apply to classes of spastic children. The number of spastics assigned to one teacher must be smaller, especially when children under six years of age are admitted. There should be provision for physiotherapy preferably through direct employment of a physiotherapist, or, less desirably, by having the class in or near a hospital or clinic which may provide this service.

¹ School Code section 3.613

The teacher should be thoroughly familiar with the etiology, characteristics, and treatment of spasticity. She should have a special credential in speech correction in addition to other required certification. For teachers in classes to which children under age six are admitted, a course in nursery school training is desirable, if not essential.

PHASES OF A SPECIAL PROGRAM FOR CRIPPLED CHILDREN

Discovery, Cure, and Care

The responsibility of the school is not discharged by merely providing academic instruction, whether in regular or special classes. Every teacher should be on the lookout for physical conditions which may handicap any child in social, educational, or vocational adjustment. Every teacher should know the facilities available or which may be made available for remedial treatment, and should encourage and co-operate in all movements for the prevention of crippling. Special class teachers should be in addition prepared to assist in such physical and occupational therapeutic measures as may be consistent with special classroom techniques.

It is true that the emphasis on measures of physical restoration may shift, instruction being subordinated to treatment in hospital classes, and treatment being subordinated to instruction in other special classes. Nevertheless, the importance of doing everything possible to improve physical condition must not be overlooked. Physical examination, medical treatment or surgery, physiotherapy under medical supervision, occupational therapy, corrective gymnastics and exercise, handwork for muscular co-ordination and development, rest, and the supplying of milk and warm lunches are often essential factors in the program; and these aids should go hand in hand with instruction.

Social and Emotional Adjustment

Equally important is the matter of mental hygiene. Crippled children are obviously at a disadvantage physically in competition with normal children. Lack of attention to this fact can, and all too often does, lead to feelings of inferiority which may easily result in a more serious handicap than the physical defect. Association with other crippled children in the special class helps to counteract this danger by placing each child on a basis of approximate equality with others in his immediate environment. But this alone is not enough. Sooner or later the child must face open competition in the world of affairs; to succeed he must find an interest which may compensate for his defect. The first step in this direction is the mastery of feasible assignments in the

classroom and learning to overcome difficulties by his own efforts. Best of all compensating factors is the discovery of some accomplishment in which he may excel. The teacher, therefore, should not only aid each child in the development of maximum self-reliance, but should be ever alert to discover any special talent or aptitude which may be developed to a point of superiority over those of the normal group, or in which he may be their equal.

At the same time, the attitude of the teacher and the atmosphere of the class should be such as to aid the development of a wholesome outlook upon life and the building of a philosophy of acceptance of the reality of disablement but without bitterness and with the conviction that physical impairment need not and must not interfere with accomplishment and success. The importance of this attitude cannot be too strongly emphasized. One effective means of bringing about a wholesome attitude is to direct the child's attention as much as possible away from his handicap and toward the development of his major possibilities. Friendliness and cheerfulness are in themselves compensating factors of major importance and should be developed as such, as well as for their own sake.

The development of wholesome attitudes and outlooks is not a product of the classroom alone; parents can improve a crippled child's disposition or can impair it; other members of the family, the doctor, the nurse, the minister, the social worker, all have a share in influencing the development of his character. The teacher can do much, however, and should feel a responsibility towards the development of proper attitudes on the part of all who come in contact with the child. Parents and the public must be educated to treat the crippled child as they treat other children—not to express pity, not to shield, not to spoil, not to show aversion, but to accept as not essentially different from his fellows.

The Problem of Segregation for Instruction

Another basic policy in the social as well as in the educational development of crippled children is to reduce segregation to a minimum. Home instruction eliminates school contacts so important for social adjustment. Assignment in special classes also limits normal social contacts and should be the method adopted only if the child cannot profit by regular class instruction. As soon as the special class has served its purpose, transfer to the regular class should be the rule. To the greatest extent possible, pupils in special classes should be sent to regular classes for such activities as they can carry on there. All crippled children should have frequent contact with normal children. It is true that most crippled children have had contacts with other children in

the home and may have made an adjustment there. The child must, however, make further adjustment in the school environment. Such adjustment will be facilitated by graduating it to the child's development. The first step may well be to adjust to his fellow-pupils in the special class who are handicapped just as he is. Then he can more easily adjust to normal children as rapidly as he can keep pace with them. To place him too soon in too difficult situations in regular classes might destroy the self-confidence he has gained in the special class. In considering the advisability of segregation, just as in every other phase of the special educational program, it should be kept in mind that *individual diagnosis* is all-important. *The child* must be kept in mind, not children as a group.

ORGANIZATION AND ADMINISTRATION

Legal Provision for Special Instruction

Crippled children are included among the physically handicapped minors who "may be instructed in special schools or special classes, in hospitals, sanatoriums or preventoriums, in the home through the employment of home instructors, by co-operative arrangement with the Bureau of Vocational Rehabilitation of the State Department of Education, or by any other means approved by the State Department of Education."¹

Special Schools or Classes. Special schools for crippled children are found only in the larger cities where the number of such children justifies the organization of a separate school unit. The more usual procedure is to establish a special class for instruction and attach it for administrative purposes to one of the regular schools of the district.

Home Instruction. If for any reason a special class cannot be established, or if one or more children are so seriously handicapped as not to be able to attend a class, home instruction may be provided. The home instructor should be a special teacher employed for that purpose if the number of children who require such instruction is large enough to justify this procedure. If the number is too small to justify employment of a special teacher, a regular class teacher may be assigned who is given extra pay for the overtime service required. In present practice the rate of pay varies greatly in different districts but an hourly rate of \$1.50 to \$2.00 is typical. There is also considerable variation in the number of visits and hours of instruction scheduled for each child. In some instances, one visit a week, of one hour or one and a half hours duration, is the rule; in other cases, two or three visits are made each week. The Commission recommends that each child

¹ School Code section 3.608.

be visited at least twice each week if conditions in the district permit. It may be stated, however, that experience has shown that with only one visit a week, supplemented by assigned interim study periods, some children can make satisfactory progress.

A recent development of great promise for the improvement of home instruction is the two-way intercommunication system between home and classroom. The handicapped child, in his home, may listen in on all classroom discussion and can hear pupils or teacher from any part of the room. He can also talk back to the classroom and take part in the discussion. Obviously, this method provides many of the benefits of classroom instruction although the pupil may be confined to bed many miles away. The equipment is not expensive, and reports from Iowa, where the system is already in use by more than twenty school districts, indicate that the service charges are reasonable and results very satisfactory. The Commission will be glad to provide information concerning the producers of equipment, upon request.

Instruction in Co-operation with Bureau of Vocational Rehabilitation. Subject to certain limitations such as length of state residence, degree of disability, mental capacity, feasibility for training and subsequent employment, contained in the Vocational Rehabilitation Act, crippled pupils sixteen years of age or over may be instructed in co-operation with the Bureau of Vocational Rehabilitation, State Department of Education. Such instruction is always vocational in nature, and is intended to lead directly into employment. It is usually provided in cases where there is need for intensive vocational training of a type not offered in the public school program. When suitable, the employment training method on an individual basis may be used for this purpose. The Bureau should be consulted for details of this procedure as well as for other types of specialized training to meet individual needs.

Organization in a Large City School District.

It is obvious that no one type of organization can be prescribed to fit the widely varying situations to be met in the state. The number of children for whom special provision should be made is perhaps the most important factor to be considered in planning such a program, but other factors must also be considered, including the following: geographical distribution; types and degree of disability; availability of transportation facilities; availability of housing facilities; availability of qualified teachers; and nature of the regular school administrative organization. The following examples are illustrative of types of organization now in effect.

The Los Angeles City School System is an excellent example of the large city offering every type of educational opportunity to its crippled children. The Section of Education of Exceptional Children, under the general direction of an assistant superintendent of schools and in charge of a special supervisor, is responsible for the education of all exceptional children. Within this Section are three school units for "crippled and delicate children," with three principals and a large staff of teachers. (It will be noted that "delicate" children; i.e., children in the lowered vitality group, are grouped with crippled children.) Special classes, both elementary and secondary, are maintained, as well as hospital classes, hospital bedside instruction, and home instruction. Under such conditions it is possible to group crippled children in special classes according to age and grade and to follow the regular course of study quite closely, a highly desirable practice. It is also possible to provide opportunity for social contacts and, through such activities as orchestra, glee club, dramatic club and student body meetings, to aid in social adjustment and in the development of initiative and self-reliance. Excellent results are obtained through this type of organization.

Organization in Other City Districts

In districts in the smaller cities it is seldom possible to set up a special school for crippled children with one teacher for each grade. Often one teacher is assigned to teach several grades grouped together in the same room. Sometimes it is necessary for a single teacher to instruct all the crippled children in the district, regardless of age and grade level. Recognizing the difficulties to be met, it can only be urged that the best arrangements possible be made to fit the existing conditions. In general, adherence as closely as possible to the regular school pattern is advisable. The set-up in Sacramento is typical of the organization in a city of approximately 100,000 population.

In Sacramento, an Assistant Superintendent of Schools is in charge of the education of all exceptional children. Under his general direction, a school for crippled children is maintained. It is housed in two rooms in the wing of one of the regular school buildings but has a separate entrance opening onto the school grounds. A special school bus transports the children to and from school. An average enrollment of approximately twenty pupils is maintained. In addition to classes in the school, individual instruction is provided for approximately twelve children at home or at the hospital bedside by two bedside instructors.

Services Provided by County Superintendents of Schools

Section 3.622 of the School Code provides that "County superintendents of schools may in their discretion provide for the education of physically handicapped minors who otherwise would be denied proper educational advantages." The types of programs established in the various counties vary greatly, as might be expected in view of the wide variety of conditions to be met.

Siskiyou County is an outstanding example of what may be accomplished in a county of large area but with relatively small population, with no large cities, and where long distances must often be traveled over mountain roads and under adverse weather conditions to reach isolated communities. Interest in the welfare of crippled children on the part of the county superintendent of schools and the county board of education resulted in the employment of a special teacher. Working out of the county superintendent's office, she provides individual instruction for seventeen physically handicapped children throughout the county, most of whom are crippled children. The school supervisor and county school nurses are also interested in this problem, and in the course of their work assist in the discovery of children who may need special attention and refer them for appropriate treatment.

In Orange County, with a population of 135,000, the program for crippled children is carried on by the office of the County Superintendent of Schools in the rural areas and in all cities except Santa Ana, where home instructors are employed by the local Superintendent of Schools. For rural areas and smaller cities, other than Santa Ana, the Assistant County Superintendent of Schools directs and supervises the work of five full-time and three part-time traveling instructors. Each instructor is assigned to certain cities and rural areas within the county so that there will be no overlapping. They visit the home of each crippled child twice a week, remaining one hour at each visit.

The average number of crippled children taught by each full-time instructor is fifteen. They drive an average of 193 miles per week in making their visits.

At the Orange County Hospital are three teachers. One of these teachers is employed by the county superintendent of schools, the other two by the Santa Ana Public Schools. The teacher who is employed by the county superintendent of schools teaches all the elementary children and part of the high school pupils, acts as director of the home teachers employed by the county, and works with the medical and nursing staff in co-ordinating the whole educational program carried on in the hospital.

The teachers at the hospital who are employed by the Santa Ana Public Schools teach the high school pupils and the adults. One teacher gives instruction in various kinds of handicraft; the other in general academic subjects.

The Problem in Rural Communities. Provision of special instruction for crippled children in the smaller communities and in rural districts presents a difficult problem. In the counties where an organized program has not been established it is recommended that county superintendents of schools make a study of the need for such a program in their respective counties and consider the various possible methods of meeting the need. The following suggestions may be found of value. If there is not a sufficient number of crippled children in any one district to justify the establishment of a special class, two or more districts may find it desirable to establish and maintain a class jointly. If special classes are available in a near-by city crippled children living within a reasonable distance may be enrolled therein and transportation provided for them. Or, in lieu of providing transportation, districts may pay to the parents of such pupils the cost of food and lodging at a place convenient to such classes, provided the cost thereof does not exceed the cost of transportation.¹ The county superintendent, as well as the school districts, may make similar provision for pupils of elementary grade.² If for any reason it is not desirable for any district or group of districts in the county to provide a special class the county superintendent may establish one or more such classes in accordance with the provisions of School Code section 3.622, or the county superintendent may employ emergency teachers to provide special instruction in the regular schools of the district of the county. It has already been pointed out in the review of the organization of the special program in Siskiyou County and Orange County that home instructors may be employed by the county superintendent of schools for individual or bedside instruction throughout the county.

In districts in which none of these methods may be possible or desirable, the regular class teachers should be informed of the urgency of the problem and urged to do all that they can for the crippled children in their districts. This service may include assistance in discovery of crippled children, their reference for appropriate treatment or to special classes which may be available elsewhere, or by arranging to have them sent to the regular class if no special class is available, with recommendation for special attention.

¹ School Code section 1.73

² School Code section 4.192

Admission to Special Class

Eligibility for special classes is set forth in the School Code as follows: "Any minor, who, by reason of a physical impairment, can not receive the full benefit of ordinary educational facilities, shall be considered a physically handicapped individual for the purposes of this article."¹

School administrators must follow this definition of a handicapped child for the purposes of administration. It is their authority for extending aid to such a child.

Recommendation of Physician. Children should be assigned to orthopedic classes only on the recommendation of a physician, preferably that of the school physician or an orthopedic surgeon. Even though one outstanding authority believes that an ordinary physician is not competent to diagnose the needs of crippled children, in the opinion of the Commission the school physician, and even the family doctor, in the absence of a specialist, may be relied upon to make the recommendation.²

Factors in Determining Eligibility. Degree of physical impairment is not the only factor to be considered in determining eligibility to special classes. Occasionally a child is found who is more seriously disabled than the average pupil in an orthopedic class, but who, by disposition or by reason of excellent home training or both, refuses to consider himself handicapped and has learned to overcome the difficulties encountered. Such a child would be harmed rather than aided by assignment to a special class. On the other hand, some pupils with only a moderate disability may be quite unable to cope with the regular class situation until adjustment is attained through the facilities of the special education program. Accurate individual diagnosis should constitute the basis for assignment. Conformity with general regulation should be the rule, but discretion may be exercised in order to meet the peculiar circumstances of each case. The diagnosis must therefore include not only the findings of the medical examination, but also consideration of psychological, emotional, social, and educational factors.

Mental Level. The mental factor is one which frequently presents an administrative difficulty, especially in the smaller districts which have no special education facilities for the mentally deficient. Generally speaking, there is no relationship between physical disability and mental deficiency except in those cases in which both types of disorder can be traced to a common cause, such as congenital syphilis or certain

¹ School Code section 3.606

² Guy L. Hilleboe, *Finding and Teaching Atypical Children*. Contributions to Education No. 422. New York: Bureau of Publications, Teachers College, Columbia University, 1930, p. 98.

contagious diseases of childhood; yet the fact remains that there is as great a proportion of children of low IQ among the disabled as among the nondisabled. The double handicap presents serious problems. Too often mentally subnormal children are assigned to orthopedic classes simply because there is no other provision for them. Such assignment is deleterious to their classmates of average or above average intelligence. The work, development, and adjustment of a small group of mentally normal children must necessarily be hampered by the presence of subnormals. On the other hand, mentally subnormal children will make better progress if they are the focus of attention in a special class set up specifically to meet their particular education needs.

There is no general agreement as to the lower mental level which should disqualify children admission to orthopedic classes. In general, it may be said that the child who cannot profit by the learning situation should be excluded. It may also be said, and again in general terms, that in so far as conditions may permit mentally subnormal children should not be grouped with mentally normal children in orthopedic classes.

INSTRUCTION

General Statement. For purposes of instruction the needs of the crippled child are identical with those of the normal child. In general, therefore, the regular course of study should be followed as closely as possible. Adherence to this policy is the most certain way to insure normal progress and development. Also, it will enable pupils to attend regular classes part time as conditions may permit, and to return to regular classes for full-time work as soon as the need for segregation ceases.

In Elementary Grades. In the elementary grades there should be special provision for craftwork in addition to the regular curriculum. Muscular co-ordination can be greatly improved by handicraft activities, including paper and plastic work, raffia, reed, hand-loom and foot-loom weaving, leather, wood and metal work, and the like. At the same time these activities often develop interests and indicate aptitudes which will aid in counseling for the choice of a future vocational objective. It is especially recommended that homemaking courses be provided; too little attention has been paid heretofore to this important activity which combines practical values with educational and social development.

In Secondary Grades. On the secondary level, effort should be made to provide two types of instruction; namely, the usual course of study for those who are pursuing a general curriculum or who are

preparing for junior college or university, and a modified program with emphasis on prevocational training for those who for any reason may find impossible or inadvisable the pursuit of higher education. Individual planning with the aid of a competent vocational counselor should determine the course to be followed in each case. In any event, however, the policy of providing each child with the broadest possible general background should be observed, training of a strictly vocational nature being deferred until a solid foundation of general education has been laid.

Counseling. While educational, social, and vocational guidance is desirable for all children, it is especially important for the handicapped. Adjustment to the school situation and to their fellow students is usually more difficult for them. After leaving school they cannot follow the trial-and-error method of working in various occupations until a suitable one is found. To be employable at all they must have some special skill to offer in a line of work in which their impairment is not a vocational handicap. Class teachers are seldom qualified to give them sound vocational advice, and even regular school counselors are often at a loss to suggest a type of work which is feasible in view of a particular disability and which also capitalizes the vocational assets of the handicapped child. This difficulty is recognized, and legal provision has been made for the solution of the problem by the appointment of special counselors or co-ordinators.¹

Special Co-ordinators. With a single and temporary exception, no use was made of the authorization for this counseling by any school district until 1935. In that year the Bureau of Vocational Rehabilitation proposed to several school districts that they appoint a special co-ordinator for handicapped children who would also serve as local representative of the rehabilitation service, with provision for reimbursement by the state of half of the co-ordinator's salary. The experiment was so successful that it was extended, and now 53 school districts have the services of a special co-ordinator, either full time or part time, in co-operation with the Bureau. The effectiveness of the co-ordinator in counseling physically handicapped children is enhanced by his part time practical work in rehabilitation service which demands constant contact with industry and intimate knowledge of facilities, occupations, and opportunities available for the handicapped.

In districts which do not yet have a special counselor or co-ordinator, the services of the staff of the Bureau of Vocational Rehabilitation are available to aid in counseling the handicapped children of the district. The broad industrial experience of these specialists in work for

¹ School Code section 3.609

the handicapped is helpful in suggesting routine jobs feasible for disabled persons in the dull-normal group, skilled mechanical trades for those of normal intelligence but not "book-minded," and technical, commercial or professional vocations for the normal and above average. The counseling procedure always takes into account the personal characteristics and assets of the individual, and is administered on a case work basis.

Provision for special counseling service is not only more effective in itself, but it centralizes the counseling function and thus avoids the harm that may be done by conflicting advice from many sources which naturally tends to confuse the child and hinder rather than aid in making a sound decision.

Vocational Training. Vocational training is a function of the public schools no less than academic education. Such special training should always be deferred in favor of maximum general educational preparation. The vocational factor should be kept in mind, however, and prevocational training has a distinct place in the secondary grades whether it takes the form of academic preparation for junior college or university entrance or leads to more immediate employment. For pupils who do not expect to go to college, vocational education is advised if available, including, of course, commercial subjects. If suitable courses are not available in the school, the disabled child should be referred to the Bureau of Vocational Rehabilitation, State Department of Education, which is in a position to provide special training, without cost to the family, in any suitable vocation and on any level. It is coming to be a general practice to refer all high school graduates and drop-outs who may need such service to the Bureau, even if they have not been previously referred for special counseling.

Placement. The school should do all that it can to see that its pupils find suitable employment. The Bureau of Vocational Rehabilitation may be called upon for aid in placement of crippled youth who are eligible for its services. The co-operation of the California State Employment Service with local school officials and the California State Department of Education in placement of handicapped children is mandatory.¹ School officials and teachers should be familiar with these aids and use them on behalf of their pupils.

Co-ordination of Services

The various services for crippled children are not, and cannot be fully effective unless adequately co-ordinated. Each person and agency serving the child must know and understand what is being

¹ School Code section 3.610

attempted by every other person and agency which provides supplementary service. Physical restoration and special education may be provided simultaneously but must not be in conflict in any respect. Parents and other members of the family should be acquainted with the aims and procedures of the special class and co-operate in the program. Teachers should know the child's home circumstances and secure the co-operation of the family. The same principle applies to physicians, nurses, and social workers who should know home and school conditions just as the teacher should know the activities of these services on behalf of the child, all working together harmoniously. Teachers should likewise work with the special counselor and should look forward to the child's vocational future, just as those concerned with the vocational training phase of the program should anticipate their active participation in that program, by learning of the child while he is still in school. In short, the entire program for crippled children should be continuous and uninterrupted, the remedial, social, educational, and vocational factors being so fused and correlated as to form a chain of endeavor which will best aid the child to progress to a place in life consistent with his developed aptitudes and maximum possibilities.

Qualifications of Teachers of Classes for Crippled Children

General Statement. Up to this time, too little attention has been paid to the selection and preparation of teachers of orthopedic classes. The necessity for special preparation is not so obvious as in the case of teachers of the blind, of the deaf, or of speech defectives. Nevertheless the experience of regular teachers who have been assigned to orthopedic classes without special preparation and have been forced to learn "on the job" how to teach effectively in such classes has led to a general recognition of the value of teacher-training for this specialized field. Only through specialized training of carefully selected teachers can crippled children be given the maximum of opportunity for physical restoration, for education, for mental health, and for future competence. The reasons why teachers of crippled children need special training are summed up by a national authority as follows:

Specialized professionalized training is necessary for orthopedic teachers in order that they may: first, meet the problems growing out of the crippling conditions of the children they will teach; second, adapt curriculum materials and instructional procedures to the individual abilities and capacities of those children; third, do remedial work in the promotion of wholesome mental health; and fourth, provide the guidance and the educational services essential to future vocational and social competence. In addition, orthopedic teachers need special training in order to work helpfully with parents; to integrate their work and their department

harmoniously and cooperatively in its relationships to the rest of the school system and with the numerous public and private agencies that also serve crippled children. We interpret this integration in its broad sense to include both the professional and public relations incident to orthopedic schools.¹

Personal Qualifications. The duties and responsibilities of the special teacher in the classroom and in public relationships call for possession of the following characteristics: sound physical and mental health; adaptability and tact; cheerfulness, optimism and patience; pleasant and well-modulated voice; personality moderately extrovert rather than introvert; sincere interest in crippled children; constructively sympathetic understanding of their psychology, and of their individual problems and needs.

The opinion of one administrator in charge of special education in his district is worth repeating:

On the personal side, I want teachers who have excellent health and good looks. I do not mean beauty so much as I mean that radiance which comes with good health and physical vigor. I want my teachers to be a physical ideal that the child may imitate. I want my teachers to be positive, sympathetic, tactful, calm, interested in others and buoyant—teachers who can inspire confidence. I want teachers who have a genuine interest in the work of educating the handicapped because they will be called upon to give more of themselves than they will in any other line of teaching.²

Experience. Experience in regular classes is definitely advisable. This will insure familiarity with regular methods, administration, and curriculum. Teachers with such experience will be better prepared to facilitate recitation in and return to regular classes by qualified special class pupils. Two years of regular classroom work is considered the most desirable period of experience as a background for special teaching. This is long enough to make the teacher thoroughly familiar with the school situation, but not so long as to make it difficult to adjust to the special field.

HOUSING

Adherence to the general principle that the regular school situation be approximated as closely as possible precludes the advisability of establishing a special school in a separate building for housing classes for all types of exceptional children. Such a situation emphasizes the fact of segregation from the normal group and tends to confirm in the minds of the children the fact of being classified with those so seriously handicapped that normal contacts and competition are impossible.

¹ John J. Lee, "Training of Teachers of Orthopedic Classes," *Journal of Exceptional Children*, V (December, 1938), 59.

² Raymond R. Hutchings, Address to Section on Education of Exceptional Children, Conference of School Supervisors of Southern California, Los Angeles, April 4, 1938.

The preferred situation is to house orthopedic classes in rooms of regular schools. This will permit frequent normal contacts, and participation to the maximum extent in regular school activities including recitation in regular classes. If a separate building is deemed advisable, it should be located on the grounds of a regular school for the same reasons. Other points to be considered in relation to quarters for orthopedic classes are contained in the suggested standards outlined later in this section.

TRANSPORTATION

Transportation of crippled children to and from classes is recognized as a public school function. Not only is transportation authorized for pupils assigned to special schools or classes for physically handicapped pupils, but the district "must provide such transportation for those pupils whose physical handicaps prevent walking to school."¹ The means of transportation are varied, regular school buses, specially equipped buses, taxicabs under contract or automobiles being used. The main factors to be considered in providing transportation are safety, comfort, time en route, and economy. Sometimes an attendant is employed in addition to the driver; both should be carefully selected and trained. Routing should be carefully planned to keep at a minimum the time each child must spend in travel. Also, the physical condition of each child should be considered in order to make sure that the disability is not aggravated by travel. With due care and the observation of these safeguards there is very little hazard for the children in being transported to schools.

MINIMUM STANDARDS

The State Department of Education is authorized to prescribe minimum standards for the special education of physically handicapped minors.² Such standards for classes for crippled children have not yet been formally prescribed. The following requirements, therefore, are not mandatory, although they have been accepted by the Commission for Special Education as the basis for its recommendation to the Department at such times as the formal adoption of standards may be deemed advisable. It should be stated further that in lieu of *minimum* standards the Commission has preferred the more flexible plan of requiring reasonable compliance with higher standards. This procedure will permit reasonable modification to fit condition and circumstances as they may be found in particular districts.

Special requirements for classes of spastic children are being formulated by the Commission and will be published at a later date.

¹ School Code section 3.611

² School Code section 3.617

Admission to Special Class

Legal Provision. Eligibility in general is indicated by following provision of the School Code: "Any minor who, by reason of a physical impairment, can not receive the full benefit of ordinary educational facilities, shall be considered a physically handicapped individual for the purposes of this article."¹

Recommendation of Physician. Admission to and transfer from a special class should be made upon the recommendation of the school physician or an orthopedist.

When the child is admitted to a special class the physician should prescribe rest, exercise, correctional gymnastics, occupational therapy, and amount of school work for each child, based upon physical examination.

Mental Level. Children whose mentality is so low that they cannot profit by the school program provided and that they would retard the progress of the class should not be admitted to classes of "crippled" children of normal mentality. Certainly admission of children with an IQ of less than 70 should probably be avoided. (This does not apply to cases of mental retardation caused by lack of educational opportunity.)

Segregation of Spastics. Cases of spastic paralysis which have serious muscular inco-ordination or extreme speech difficulty should be segregated in a class apart.

Size of Class

Classes should be kept small enough to permit individual attention and adaptation of study and activities to meet the individual needs of each pupil. If the class has pupils in several grades multigraded, a maximum of fifteen is permissible under favorable conditions and depending upon the degree of existing difficulty. If only one or two grades are assigned to a teacher, the number in the class may be increased up to a maximum of twenty-five.

Classrooms

Location. Classrooms should be on the ground floor, and readily accessible to exits, wardrobes, lavatories, toilets, and drinking fountains.

Other Conditions. Classrooms should be quiet, well lighted, and well ventilated; large enough to permit freedom in placement of classroom equipment and at the same time leave ample room for pupils to move about on crutches and in wheel chairs, if necessary, as well as space to play.

¹ School Code section 3.606

The flooring should be of material which will prevent or reduce to a minimum slipping and falling.

Entrances where busses unload should be on a level with bus floor. Ramps should be provided when necessary for children who find it impossible to climb steps. Steps should also be available and their use encouraged for children who are physically able to use them. They should, of course, be provided with handrails.

Rest Rooms. Rooms for resting should be provided, close to classrooms, equipped with cots and blankets. Sunrooms are desirable in most instances. In the absence of a separate room, space for rest may be screened off from the classroom, but this is much less desirable.

Equipment

Desks and chairs. There should be movable desks adjustable as to height and with adjustable seats; attachments for support of limbs and for support of books, as needed. Wheel chairs should be available for use when needed, and footstools of varying height to suit individual needs are useful.

Special Equipment. Tables, work benches, tools, and other equipment for handicraft work should be provided in sufficient quantity and of adequate nature to take care of this type of pupil activity. Equipment for a rhythm band is also desirable.

Transportation

Transportation, whether by busses or taxis, should be of such character as to insure the welfare of handicapped pupils to and from school. Drivers should be strong enough to carry those unable to walk; they should also be in good physical health; of good character and appearance, with ability to manage children as well as to drive skillfully and carefully.

CONCLUSION

Although the special educational program for crippled children has developed consistently during the past twenty-five years, much remains to be accomplished in making the program effective throughout the state. It is now satisfactory only in large communities, in a few of the smaller districts and in a few counties. The most serious problem is found in the rural districts.

Under the present liberal provisions of the School Code and regulations of the California State Department of Education, an adequate special program is possible in any part of the state. The special programs already established demonstrate what may be accomplished under

varying circumstances. Assistance in planning these programs will gladly be given by the Commission for Special Education.

Local school officials should give due consideration to this important phase of education, to the end that no crippled child in the state shall be denied equality of educational and later vocational opportunity.

SOURCES OF INFORMATION AND SELECTED BIBLIOGRAPHY

General Sources of Information

International Council for Exceptional Children, Flint, Michigan.

In addition to publishing the *Journal of Exceptional Children* this organization occasionally publishes other bulletins and is in a position to provide information concerning education of the handicapped child.

National Society for Crippled Children, Elyria, Ohio.

In addition to publishing to its magazine this Society maintains a circulating library of books and magazines relating to crippled children, including educational phases of service for such children. Catalogue is available upon request, and books and magazines are available to nonmembers, as well as members, upon payment of a small fee.

Northern California Council for Exceptional Children, San Francisco.

The Council publishes annually a yearbook usually devoted to detailed reports of procedures and papers presented at annual meetings of the Council.

Current Publications

The Crippled Child. Elyria, Ohio: National Society for Crippled Children. Bimonthly. \$1.00

Contains timely articles on the care and education of crippled children.

Journal of Exceptional Children. Lansing, Michigan: International Council for Exceptional Children (1235 West Michigan Avenue). Monthly, October to May. \$1.00.

Contains authoritative articles concerning deviates and their education.

Books and Treatises

ABT, HENRY EDWARD. *The Care, Cure and Education of the Crippled Child.* Elyria, Ohio: International Society for Crippled Children, 1924.

A general survey of the field indicated by the title, with report of facilities available for service in the field.

Education of the Handicapped. History. Vol. I, 1939. Problems. Vol. II, 1940. Edited by Merle E. Frampton and Hugh Grant Rowell, Yonkers-on-Hudson, N. Y.: World Book Co., Vol. I, Chap. V.

The first volume gives an interesting and authoritative history of the education of crippled children.

The second volume is a presentation of existing work with the handicapped, with special reference to problems of the moment and their solution, trends as far as can be determined, and a further tabulation of the needs of this field of service.

HECK, ARCH O. *The Education of Exceptional Children: A Challenge to Teachers, Parents, and Laymen.* New York: McGraw-Hill Book Company, 1940, pp., 120-156.

Contains chapters on the education of the crippled children, problems faced in educating cripples, and description of many existing programs. This is the latest and one of the most complete publications in this field.

HILLEBOE, GUY L. *Finding and Teaching Atypical Children*. Contributions to Education No. 442. New York: Bureau of Publications, Teachers College, Columbia University, 1930, pp. 97-103 and 144-146.

A study of current status of work with crippled children, statistical and descriptive, with many valuable suggestions.

HORN, JOHN LOUIS. *The Education of Exceptional Children*. New York: Century Co., 1924, pp., 291-313.

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REEVES, EDITH. *Care and Education of Crippled Children in the United States*. New York: Survey Associates, 1914.

A handbook for the use of those who are interested in the care of crippled children.

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A report of the findings of the Conference, with statistical and descriptive data.

WALLIN, J. E. W. *The Education of Handicapped Children*. Boston: Houghton Mifflin Co., 1924, pp., 114-122.

A statement of technical requirements for classes for crippled children including admission requirements, transportation, discharge of pupils, organization, curriculum, qualification of teachers, and the like.

THE EDUCATION OF PUPILS WITH SPEECH DEFECTS AND DISORDERS

MABEL F. GIFFORD, *Chief, Bureau of Correction of Speech Defects*

INTRODUCTION

It is the purpose of special education in the field of speech correction to help children attain their maximum speech proficiency by assisting in providing instruction designed to remove blockades that have been serious handicaps. Good speech is universally recognized today as an important economic, social, and cultural asset. Greater attention should therefore be given to the problems of speech correction. The public schools, as integrating social forces, must bend their efforts to eradicate the hampering limitations imposed upon the individual by defective speech and voice.

Throughout the country there is a growing interest in speech education, but there is still much confusion between training for speech arts and speech therapy. The two fields are both connected with speech, but there is a sharp distinction between them.

Training for speech arts includes dramatic art, diction, public speaking, voice production, choral speech, and deals with the speech of "normal" speakers. Speech therapy, on the other hand, deals only with abnormal voice and speech, and ends where the teacher of speech arts begins, that is, at the point where normal speech has been achieved.

Classification

Speech defects and disorders may be divided into two main classifications: nervous difficulties and articulation defects. Included in the first classification are such manifestations of speech difficulty as stuttering or stammering, hesitation in the speech, or the appearance of unintelligible sounds due to cluttering. For the most part the articulatory defects are functional and are manifested by omission of consonants, lipping, and substitution of certain incorrect sounds for the correct ones. Physical defects sometimes cause articulatory difficulties where the sounds are affected by nasal obstruction, tooth malformations, cleft palate, and the like.

NERVOUS SPEECH DISORDERS

The nervous speech disorders are marked by some emotional disturbance that causes a blocking in speech. Sometimes this occurs

at the beginning of the word, sometimes in the middle, and sometimes there is temporarily a complete inhibition of speech.

The causes of functional nervous speech disorders are psychological, and the speech disorder itself is an external symptom of some difficulty which may have a psychoneurotic origin. Severe shocks and emotional conflicts in very early childhood may remain as subconscious memories for many years and continue to disturb the speech until correction is made.

Many influences enter into the causes and the continued manifestations of nervous speech disorders. The preschool or early home environment is extremely important. If the child with the nervous speech disorder is living in a home where there is a lack of understanding, inconsistency, or laxity in discipline, tyranny, quarreling, sarcasm, or unfavorable comparison of that child with another, the speech disturbance is likely a result of the environment. The school environment must also be considered. If the teacher is too severe or impatient, or if the child is subjected to ridicule by his classmates, his confidence in his power to control himself may be seriously shaken.

The following outline describes in brief form the various kinds of nervous speech disorders commonly found among children in the public school.

A. STAMMERING

1. Audible: audible or spasmodic action of the speech organs
2. Silent: inability to speak at times; often no outward sign of the inner struggle

B. STUTTERING

1. Rapid repetition of the first sound in a word. Example, t-t-t-to

C. HESITATION

1. Excessive self-consciousness and lack of poise with speech confusion

D. CLUTTERING

1. Rapid, choppy, very indistinct speech, almost unintelligible

Stuttering—Stammering

Both stammering and stuttering are terms commonly used in this country for functional spasms of speech. While the manifestations of these disturbances are slightly different, the causes and the treatment are similar. To avoid confusion, the word "stammering" is used throughout this description. In Europe and in several centers

in the United States, "stuttering" is used to cover both of these speech manifestations.

There are two distinct types of stammering which occur at different periods. The superficial type often occurs during the earliest years when the child is acquiring articulatory co-ordination. Often the child is not only fumbling for speech and language, but is also laboring under the stress of many intruding ideas. If no serious emotional disturbance comes at this time, the child sooner or later establishes the proper co-ordination and overcomes his stammering. This is often described as "outgrowing" it.

The second or true type of stammering generally occurs at a later period when speech and language have been completely acquired. Histories of many of these cases show that an emotional maladjustment due to environmental disturbances of some nature is causing emotional conflict. Since it is largely through speech that man is able to express his emotions, it is but natural that these conflicts should be manifested in speech. The second type is the kind of stammering found in the speech classes in our schools.

At the onset of this symptom, the child's speech failure is repeatedly called to his attention by the alarmed parents. In many cases, the child is punished and invariably told to repeat the words over which he has stumbled. This repetition soon starts word blockades, or implants memories of speech failures. Around these speech failures cluster many emotions, such as dread of failure, fear of ridicule, dislike of being different, and other disturbing emotions. All these emotional memories form what is called the "blockade pattern" that occupies the whole attention. Will power alone cannot control the situation because of the very nature of the fixed idea which is a conviction of inability to speak. According to Dr. Charles Baudouin of Geneva, an authority in the field of psychotherapy, the law of "reversed effort" explains the futile struggles of the stammerer. The "will to speak" is overpowered by the stronger conviction that he cannot speak, and his conviction controls the motor centers.¹

There are two varieties of true stammering, audible and silent. Audible stammering is easily recognized, but there is little or no outward manifestation in silent stammering, although there is a complete muscular and psychic inhibition. This latter type of disorder is scarcely ever recognized by either parents or teachers. Children so handicapped are therefore greatly misunderstood and often thought to be either stupid or stubborn because they are unable to make a sound.

Dr. Josephine Jackson, psychiatrist and author, describes a stammerer as "cornered". This authority states that the stammerer is beset

¹ Charles Baudouin, *Suggestion and Autosuggestion*. New York: Dodd, Meade & Co., 1922, p. 137.

from within by a grip that will not loosen and from without by the darting menace of humiliation, ridicule, and defeat; that the stammerer corners himself, not by any physical handicap, nor by an inherently unfriendly environment, but by his own suggestion to himself. At first a conflict in the stammerer's emotions showed itself in a similar struggle in speech. Then came the fear, the sensation of being caught in a trap, of not being able to depend on his machine to serve his needs. Instantly a state of tension was set up; and in that tension of muscle and mind lies the whole sad secret of this speech difficulty. Speech cannot slip smoothly along over muscles that go into a viselike contraction under the stimulus of fear. It is for this reason that great stress is placed upon relaxation of both mind and body in the treatment of such cases.

Stammering is frequently intermittent in its manifestation. In many cases the pupil will stammer in school but not at home. Sometimes the reverse is the case, and the stammering is manifest at home but not in school. The fact that a child will often stammer when in a certain teacher's room, but have no difficulty when with another teacher, indicates that this condition is governed by emotional associations.

Nervous Hesitation

Nervous hesitation is manifested by agitated, faltering, confused speech. Excessive self-consciousness and lack of poise are present, often resulting in the pupil's refusal to recite. Nervous hesitation is symptomatic of the same feeling of inadequacy, inferiority, and timidity that characterizes stammering.

Cluttering

Cluttering is manifested by indistinct enunciation and excessive rapidity of speech, involving the dropping of consonant sounds, syllables, or the mumbling of sounds, syllables, and words. The breathing is often spasmodic and irregular. Yet when the speaker is not under stress, it is possible for him to articulate every vowel and consonant.

Neurotic Lisp

Neurotic lisp is a form of nervous speech disorder manifested by the substitution of a complete or partial interruption or blockade of the outgoing breath stream which is required for the production of such consonants as *f* and *v*, *s* and *z*, voiced and voiceless *th*, etc. Such interruption of the outgoing breath stream changes *f* to *p*, *v* to *b*, *s* and voiceless *th* to *t*, *z* and voiced *th* to *d*, and the like. This speech disorder is

the result of excessive muscular tension and is allied to stammering in origin. It is rather frequently found combined with stammering. However, the muscular tension excited is of a constant rather than of a spasmodic kind. It may be differentiated from other types of phonetic substitution in that it appears in emotionally maladjusted individuals more frequently, not in tranquil persons or those who do not possess normal intellectual capacities.

FUNCTIONAL AND ORGANIC DEFECTS OF ARTICULATION

The articulatory speech defects are for the most part indicated by the omission or incorrect production of some of the consonant and vowel sounds. Usually this is shown by the incorrect position of the speech organs, though it is occasionally caused by malformation of teeth, jaw, or other abnormalities of the speech tract.

The essential characteristics of the several different speech defects which fall under the above classification are defective articulation, enunciation, and pronunciation. There is one common element in all of the speech defects—a lack of proper integration of the speech mechanism as a whole.

In order for an individual to produce correct speech sounds and to respond normally to ordinary speech situations, it is necessary for him to receive sufficient stimulation and to have a neuromuscular mechanism capable of responding to the stimuli given.

If there are any deficiencies in the sense organs particularly in the hearing, in the on-relay mechanism (nerves and brain), in the muscles, or in any combination of these three mechanisms, defective speech will result; and normal speech must be built up through the acquisition of an entirely new total reaction pattern.

It is possible to discover some of these deficiencies through tests, whereas others may only be inferred from the type of defect. Where there is an apparent or inferred organic condition, defects of articulation resulting from such conditions are classed as “organic defects of articulation.” Where there are no defects in any part of the speech mechanism, that is, the sense organs, central nervous system, and muscles, the conditions are classified as “functional defects of articulation.”

The various kinds of articulatory defects of speech may be briefly described as follows:

A. FUNCTIONAL

1. Lispings on the consonants *s*, *x*, *sh*, *zh*, *ch*, *j*, observed as protrusion of the tongue, causing substitution of the “th” sound. Example, “thing” for “sing”.

2. Other substitutions: lateral (unvoiced *l*) for *s*, *w* for *r*, *f* for *th*, *w* for *l*
3. Omission of consonants
4. Infantile speech as "tan" for "can," "won" for "run," "free" for "three"
5. Invented language, completely or partially unintelligible

B. ORGANIC

1. Nose: adenoids or other nasal obstructions resulting in the loss of resonance. Example, "bood" for "moon"
2. Teeth: overshot uppers or undershot lowers, causing misplaced consonants
3. Palate: sluggish, resulting in nasal "twang"; cleft, resulting in an extremely nasal tone with defective consonants; abnormally short, resulting in sounds similar to nasality caused by a cleft palate
4. Tongue: tongue-tie, very rare; partial paralysis
5. Throat: extremely enlarged tonsils causing "thick" voice; defective vocal cords resulting in chronic hoarseness

C. FOREIGN ACCENT

1. Foreign pronunciation; foreign inflection, and word stress

D. ENUNCIATION

1. Oral inactivities: sluggish mouth action; tense jaw, slurred word endings

E. VOICE DEFECTS (functional)

- | | |
|----------------------|-----------------|
| 1. Monotonous | 5. High-pitched |
| 2. Nasal | 6. Harsh |
| 3. Lacking resonance | 7. Guttural |
| 4. Throaty | 8. Thin |

F. DELAYED SPEECH OR ABSENCE OF SPEECH

1. Physical causes: poor muscular co-ordination; deficient hearing
2. Mental causes
 - a. Normal mentality: lack of perception of speech sounds and positions required for forming them; psychological disturbances
 - b. Feeble-minded: Mutism (no speech); retarded speech, unintelligible speech and defective articulation

Infantile Speech

Infantile speech is defective speech of purely functional origin. It is characterized by the production of a distinctly different phonetic sound from that desired, or by the constant substitution of one sound for another. These particular types of defects are termed "infantile" when they are simply the prolongation of the "baby talk" stage. These same manifestations may occur in cases of defects caused by injuries or diseases in the central nervous system.

Infantile speech, when prolonged beyond the infant stages, may be the result of poor home environment, or of the continuation of infantile speech reactions, or of any undeveloped emotional life. No harm is done in "babbling to the baby," but after the baby stage is passed only the most careful speech should be heard by the child. The parent should not encourage the child to retain baby expressions, but every effort should be made to stimulate better speech and language understanding. It is the child with a neurotic tendency who may develop an individual language. This type of invented language is very difficult to correct.

Lalling—Oral Inactivity

Lalling is a type of speech defect shown by an unintelligible, slovenly mumbling of sounds. It may be due to an inactivity of the back part of the tongue and of the throat, or to the inactivity of the tip of the tongue or lips. During this type of speech, the tongue is rarely lifted from the floor of the mouth.

Oral inactivity is usually due to mental deficiency. However, it may be due to certain forms of paralysis, to a neurotic tendency, to poor speech environment, or to some illness occurring before the speech habit is acquired. Like "invented language," oral inactivity may be classified under organic or functional defects of speech.

Delayed Speech

Delayed speech is temporary absence or lack of development of normal articulate speech beyond the third year, where both the hearing and intelligence admit of the development of speech either spontaneously or under treatment. Delayed speech should be distinguished from "lack of speech" which may be due to a number of causes, i.e., mental deficiency, birth injury, abnormal fetal position, or partial deafness.

Delayed speech may be the result of a serious illness in infancy, when the development of speech may be blocked, of pampering in the home where the slightest wish of the child is anticipated so that there is no need for speech, or to an overanxious home environment.

Organic Lisp

Organic lisp is a form of speech defect resulting from anatomical defects of the speech mechanism, that is, the abnormalities of jaws, lips, teeth, tongue, palate, uvula, and nose. Adenoids, greatly enlarged tonsils, and defective hearing also cause this kind of defect.

Negligent Organic Lisp

In negligent organic lisp, malformation of the speech organs is the basis of the difficulty. A child of normal intelligence without any type of emotional maladjustment will soon learn to adjust the movement of his speech organs to the defective mechanism, so that speech will be relatively normal. On the other hand, a lowered intelligence is incapable of making the necessary adjustments. It may be stated then that this type of lisp is very frequently found where there is lowered intelligence.

Neurotic Organic Lisp

Neurotic organic lisp is distinguished from the true neurotic lisp, a condition in which there is no defect of the speech mechanism present. Where this defect exists, there is an organic defect in some part of the speech mechanism responsible for the sound substitution. There is also the necessary intelligence to correct it, but the speech defect (lisp) has been given an emotional value comparable to the pure neurotic lisp and is continued for the same reason. This is the most common form of lisp.

In the three types of lisp just described, not only *s* is affected, but also other phonetic sounds.

Invented Language

Invented language is characterized by such extreme vowel and consonant substitutions that the child's speech may be unintelligible and appear to be another language to one who has not the key to the literal changes. However, the same invented word is always used to express the same idea.

Invented language may be the result of neurotic tendency, prolonged baby talk, mental deficiency, organic defects of the oral speech mechanism, injury to the brain, such as hemorrhage from pressure at birth, or injuries, or diseases in the central nervous system. Depending upon the cause, invented language is classified under either organic or functional defects of speech.

TREATMENT

The treatment of speech defects and disorders has passed through many states of development during the last fifty years. Especially is this true of the speech disorder known as stammering or stuttering. Principles of technique are based on the premise that stammering has no organic origin, but is a problem of emotional maladjustment involving the total personality. The conflicts arising from emotional maladjustments are expressed through the speech tract in spasmodic disturbances. A program of mental and emotional readjustment must go hand in hand with the establishment of a new pattern of speech.

The therapeutics suggested for these cases may be summarized under the following headings:

1. Physical hygiene
2. Mental hygiene: emotional adjustment
3. Establishment of the fluency pattern of speech

It is impossible to give here the step-by-step technique and the background material used in the handling of various cases of speech defects and disorders. It is inadvisable for any one to attempt to correct cases of nervous speech disorders without proper training in remedial techniques and a thorough grounding in mental hygiene. The bibliography found at the close of this chapter gives detailed information regarding the theories of causes and treatment involved in the correction of speech defects and disorders.

Special Teachers

The classroom teacher may be expected to care for the general speech development and may aid those children having slight functional difficulties, such as a tendency to disorders of speech (hesitation and cluttering) or functional defects (sound substitutions, infantile speech, and oral inactivity), which she may be equipped to handle by adequate training and the use of special materials. Unless a classroom teacher, however, has had special training in remedial procedures she cannot be expected to care for the more severe difficulties. Moreover, there is a likelihood that the severity may be increased should a child be made self-conscious through the teacher's lack of understanding and knowledge.

Training and experience needed by speech correction teachers for successful field work may be listed as follows:

1. The teacher's own adjustment.
2. Ability to make surveys of speech correction cases and to organize speech correction classes in the public school system.

3. Knowledge of the method for computing average daily attendance of classes for the education of the physically handicapped for the purpose of securing state reimbursement for such classes.
4. Ability to determine the kinds of speech defects and disorders.
5. Knowledge of special remedial techniques for the correction of nervous speech disorders—stuttering, stammering, nervous hesitation, cluttering—for individual and group work at different age levels. Methods of approach based upon complete retraining in psycho-physical control and social adjustment.
6. Knowledge of the application of phonetics to the correction of functional articulatory defects of speech for individual and group work at the different age levels. A teacher should have ability to determine whether the articulatory defect is due to: (a) undeveloped or infantile speech; (b) functional; (c) organic (in speech tract or hearing); (d) psychological complications; (e) neurological aspects; (f) foreign accent.
7. Preparation of daily lesson sequences of teaching with organized materials to carry out the techniques.
8. Mental hygiene training that will enable a teacher to:
 - a. Make comprehensive case studies and interpret the findings
 - b. Make home visits to secure the co-operation of parents
 - c. Teach the practical application of changing habits
 - d. Help the child to face and to master his problems
9. Ability to secure the co-operation of the home, the classroom teacher, and co-ordinating agencies, such as parent-teacher groups, child guidance and health departments.
10. Ability to call together groups of classroom teachers to discuss prevalent problems requiring their immediate co-operation in the classroom, demonstrate methods for speech improvement, minor corrections, and habit-forming assistance.

ORGANIZATION OF SPEECH CORRECTION CLASSES

Speech correction classes are organized in various ways throughout the state, depending on local situations. In larger centers, groups of speech correction teachers are assigned to cover the different schools. In smaller districts one speech correction teacher may cover all the classes, or again several districts may combine in employing the services of a trained speech correction teacher. In other places a regular classroom teacher who has had speech correction training does part-time speech correction work.

A survey of the entire school should first be made by a trained speech correctionist for the purpose of locating and classifying speech

difficulties. After a speech teacher has obtained the necessary information concerning children who need remedial treatment, she examines and classifies them according to seriousness of defect and age level. The teacher then co-operates in the scheduling of special classes to fit the demands of the general school program.

Pupils are excused from their regular classes for the remedial work in speech correction.

It is advisable to reserve some time for conference with parents, since co-operation with the home, as well as with the school personnel, is essential to achieve the best results. Some visits to the home should be made in the evening when both parents can be present.

PROVISIONS FOR FINANCING SPEECH CORRECTION CLASSES

School districts are reimbursed by the state for the excess cost involved in the education of all types of physically handicapped children, including those handicapped by speech defects, in an amount not to exceed \$200 for each such pupil in average daily attendance. "Excess cost" is determined by computing the difference between the average current expenditure per unit of average daily attendance in regular classes and the average current expenditure per unit of average daily attendance of physically handicapped children.¹

The California State Department of Education has adopted the following regulation concerning the requirement for special credentials for speech correction classes. Beginning July 1, 1941, each teacher employed in a special class for the correction of speech defects and disorders shall be required to hold a special credential for teaching correction of speech defects valid for service in the public schools of the state. No apportionment of state funds shall be allowed on account of the attendance of pupils in any special class for the correction of speech defects or disorders or on account of the excess cost incurred in providing such special educational facilities, unless such special class shall have been taught by a teacher holding a special credential for teaching correction of speech defects valid for service in the public schools of the state.²

This regulation has been adopted as a minimum standard for the education of minors classified as physically handicapped because of speech defects or disorders, in accordance with the provisions of California School Code section 3.617.

¹ Detailed information on the apportionment of funds to special classes for pupils with speech defects is contained in the following publication: Walter E. Morgan, *State Apportionments for the Education of Physically Handicapped Children in California*. Bulletin of the California State Department of Education No. 9, October, 1939 (revised).

² "Departmental Communications," *California Schools*, XII (May, 1941), 96.

SERVICES AND ACTIVITIES OF THE BUREAU OF CORRECTION OF SPEECH DEFECTS

The services and activities of the Bureau of Correction of Speech Defects may be listed under the following headings.

1. Assist in the preparation of new instructional materials and bulletins covering correction of speech defects and disorders; also materials on speech improvement.
2. Visit schools on request of local school administrators for the purposes of
 - a. Helping to find the students with speech handicaps
 - b. Diagnosing the speech handicaps
 - c. Assisting to provide adequate corrective measures
 - d. Suggesting extracurricular activities for the socialization of the speech handicapped.
3. Assist teacher-training institutions to organize correlated courses in the correction of speech defects and disorders.
4. Conduct demonstration classes for observation of the application of remedial techniques at the various age levels of pupils in the public schools.
5. Make surveys and studies and disseminate information to improve teacher efficiency in the fields of speech improvement and speech correction.
6. Promote and participate in educational meetings and enlist the aid of co-operating agencies; promote a program of parental guidance to be carried on through classes, educational pamphlets and parent-teacher associations for the purpose of helping parents establish good personal speech habits in the home, and satisfactory social adjustment.

SOURCES OF INFORMATION AND SELECTED BIBLIOGRAPHY

General Sources of Information

American Speech Correction Association, 419 Boylston Street, Boston, Massachusetts.

Organized for national co-operative study and discussion of the problems relating to speech defects and disorders.

National Association of Teachers of Speech, 10 Chester Street, Champaign, Illinois.

Studies and discusses all phases of speech education.

California Society for the Study of Speech Therapy, 515 Van Ness Avenue, San Francisco, California.

Seeks the advancement of professional growth through the mutual exchange of ideas and further co-ordination between the various departments of speech and guidance.

Western Association of Teachers of Speech, Stockton Junior College, Stockton, California.

Brings into closer contact teachers in all fields of speech education in the Western States.

Current Publications

Journal of Speech Disorders. Columbus, Ohio: Ohio State University (324 Darby Hall). Quarterly. \$3.00.

Contains timely articles on the various phases of speech disorders.

Quarterly Journal of Speech. Champaign, Illinois: National Association of Teachers of Speech (10 Chester Street). Quarterly. \$2.50.

Publishes articles on all phases of speech education, including speech correction.

Western Speech. Stockton, California: Western Association of Teachers of Speech (130 North California Street). Quarterly. \$2.00.

Serves as official organ for the Western Association of Teachers of Speech.

Books and Treatises

NERVOUS SPEECH DISORDERS

APPELT, ALFRED. *Stammering and Its Permanent Cure: A Treatise on Individual and Psychological Lines.* New York: E. P. Dutton & Co. (third edition) 1930.

Develops theory of emotional complex, unconscious repressions, relief from stammering through psychoanalysis.

BLANTON, SMILEY, and BLANTON, MARGARET G. *For Stutterers.* New York: D. Appleton-Century Co. Inc., 1936.

Helpful in understanding stutterer's problems of adjustment; psychological and psychoanalytical discussions of family and social influences; remedial suggestions.

BLEUMEL, CHARLES S. *Stammering and Allied Disorders.* New York: The Macmillan Co., 1935.

Every speech therapist should be familiar with this theory of inhibition-conditioned reflex conflict in speech disorders.

BOOME, E. J., and RICHARDSON, M. A. *The Nature and Treatment of Stammering.* New York: E. P. Dutton & Co., 1932.

Causation and treatment of stammering; methods in vogue in London clinics; relaxation, suggestion, adjustment.

GIFFORD, MABEL FARRINGTON. *Correcting Nervous Speech Disorders.* New York: Prentice-Hall, Inc., 1939.

Primarily for teachers of pupils having nervous speech disorders, and should prove of equal value to all who are concerned with personality problems. Contains descriptions of procedures; model lessons.

GIFFORD, MABEL FARRINGTON. *How to Overcome Stammering.* New York: Prentice Hall, Inc., 1940.

Purpose of this book is to show the stammerer that his problem is not primarily a physical one, but rather a psychic one—that is, a mental and emotional problem. To this end a program of mental and emotional re-education leading to personality readjustment go hand in hand with the establishment of new patterns of speech.

WEDBERG, CONRAD F. *The Stutterer Speaks*. Boston: Expression Co., 1937.

Confidential exposé of the stutterer's inner conflicts, autobiographical; emotional re-education, based upon operationalism, functioning acceptably through new experiences of control; for teachers and adult stammerers.

ARTICULATORY DISORDERS

BARROWS, SARAH TRACY, and CASE, IDA MAE. *Speech Drills for Children in Form of Play*. Boston: Expression Co., 1929.

Suggests material for making speech improvement interesting; primary and elementary grades, creative situations, games, jingles.

BARROWS, SARAH TRACY, and CORDTS, ANNA DOROTHEA. *Teachers' Book of Phonetics*. New York: Ginn & Co., 1926.

Contains complete descriptions of all sounds of English, common faults and their corrections; for classroom teachers as well as speech therapists.

BARROWS, SARA TRACY, and HALL, KATHERINE H. *Games and Jingles for Speech Improvement*. Boston: Expression Co., 1936.

Contains brief explanation of common speech faults, practical exercises, and jingles for habituation of corrections.

BARROWS, SARAH TRACY, and HALL, KATHERINE H. *Jack in the Box*. Boston: Expression Co., 1938.

Particularly suited for primary grades; illustrated jingles for correct speech habits.

BIRMINGHAM, ANNA L. and KNAPP, GEORGE P. *First Lessons in Speech Improvement*. New York: Chas. Scribner's Sons, 1922.

Drill book of exercises in producing English language sounds and in training the ear in hearing and distinguishing shades of sound.

COTREL, EDNA, and HALSTED, ELIZABETH. *Class Lessons for Improving Speech*. Boston: Expression Co., 1936.

Handy practice material for correction of common articulatory problems; best for classroom teachers.

MOSHER, J. A. *The Production of Correct Speech Sounds*. Boston: Expression Co., 1929.

Phonetic presentation of speech sounds, considerable material for practice and drill.

NEMOY, ELIZABETH N., and DAVIS, SERENA F. *Correction of Defective Consonant Sounds*. Boston: Expression Co., 1937.

Nonphonetic presentation of consonant problems; illustrated diagrams, extensive practice material well arranged; principally for speech therapists.

SCHOOLFIELD, LUCILLE. *Better Speech and Better Reading*. Boston: Expression Co., 1937.

A practice book, lip and tongue exercises, practical arrangements of word lists, drill and poems for correction of sound difficulties (Gates word list).

STINCHFIELD, SARA M., and YOUNG, EDNA HILL. *Children With Delayed or Defective Speech*. Stanford University: Stanford University Press, 1938.

Guide and reference book for teachers and parents of children with delayed or defective speech; excellent charts and suggestions for beginners.

WEST, ROBERT WILLIAM; KENNEDY, LOU, and CARR, ANNA. *The Rehabilitation of Speech*. New York: Harper & Bros., 1937.

Technical, complete, thorough in presentation of problems and indispensable for speech correction teachers.

SPEECH IMPROVEMENT, VOICE AND DICTION

ABNEY, LOUISE, and ROWE, GRACE. *Choral Speaking Arrangements for the Lower Grades*. Boston: Expression Co., 1937.

Any classroom teacher can follow instructions for stimulating improvement of speech in kindergarten and first three grades.

BARROWS, SARAH TRACY, and PIERCE, ANNE ELISE. *The Voice and How to Use It*. Boston: Expression Co., 1933.

Minimum of theory, practical methods with material for improving tone, inflection and intonation, articulation, and enunciation. Phonetic presentation without confusion of phonetic symbols for inexperienced teacher in classroom work.

BRIGANCE, WILLIAM NORWOOD, and HENDERSON, FLORENCE M. *A Drill Manual for Improving Speech*. New York: J. B. Lippincott & Co., 1939.

An extensive compilation of applicable drills for improving general American speech; no theory, nontechnical; preferably for upper grades.

GULLAN, MARJORIE. *Poetry Speaking for Children, I, II, III*. Boston: Expression Co., 1931, 1937.

Detailed step-by-step procedures for teachers not experienced in choric verse-speaking techniques.

KEPPIE, ELIZABETH E. *Choral Verse Speaking; An Avenue to Speech Improvement and Appreciation of Poetry*. Boston: Expression Co., 1937.

Specifically for high school or older groups; all phases of verse speaking presented; a book for students.

RASMUSSEN, CARRIE. *Choral Speaking for Speech Improvement*. Boston: Expression Co., 1939.

Basically sound in verse speaking techniques for speech improvement; discussion of various aims in gaining appreciation of better speech habits.

RAUBICHECK, LETITIA. *How to Teach Good Speech*. New York: Nobel and Nobel, 1937.

A book for speech improvement of all elementary school children; material pleasantly presented, phonetic basis including introduction to phonetic symbols and their use; enunciation and voice problems.

RAUBICHECK, LETITIA; DAVIS, E. H.; and CARLL, L. A. *Voice and Speech Problems*. New York: Prentice-Hall, 1932.

Elementary and informal presentation of methods and materials for improvement of common speech faults, for classroom and nonprofessional teachers.

RIEU, E. V. *Cuckoo Calling*. London: Methuen Co., 1933.

Delightful modern poetry for group speaking.

SMITH, MARGUERITE. *Wings to Fly*. Boston: Expression Co., 1938.

Classroom procedures easily adapted to upper grades; choric speech material limited to advanced work.

MENTAL HYGIENE

ADLER, ALFRED. *Understanding Human Nature*. New York: Garden City Publishing Co., 1929.

Emphasis upon inferiority complex as basis for neurotic behavior in young and teen-age children, and adults; character traits, causes, readjustments.

BAUDOUIN, CHARLES. *Suggestion and Auto-Suggestion*. New York: Dodd, Mead & Co., 1922.

Therapy of autohypnosis, deep suggestion in reconditioning individual with new motor habits and better adjustments to life.

GROVES, ERNEST RUTHERFORD, and BLANCHARD, P. M. *Introduction to Mental Hygiene*. American Social Science Series. New York: Henry Holt & Co., 1930.

Mental hygiene aspects of life problems—childhood and adult; satisfactory adjustments through mental hygiene.

JACKSON, JOSEPHINE. *Guiding Your Life*. New York: D. Appleton-Century Co., Inc., 1937.

The cycle of life, from infancy through senility; its difficulties and how to handle them. For every teacher.

JACOBSON, EDMUND. *You Must Relax*. New York: McGraw-Hill Book Co., Inc., 1934.

A "must" book for teachers who work under imaginary stress and undue tensions; simplified techniques; practical.

MORGAN, JOHN J. B. *Child Psychology*. New York: Richard R. Smith, Inc., 1931.

Invaluable presentation of small child, his development, and his problems.

RICHMOND, WINIFRED. *Personality, Its Development and Hygiene*. New York: Farrar and Rinehart, Inc., 1937.

Psychophysical make-up of the individual; scientific discussion of personality and its complexities.

TRAVIS, LEE EDWARD, and BARUCH, DOROTHY WALTER. *Personal Problems of Everyday Life*. New York: D. Appleton-Century Co., Inc., 1941.



PART III

REQUIREMENTS FOR TEACHERS OF CLASSES OF
PHYSICALLY HANDICAPPED CHILDREN



REQUIREMENTS FOR TEACHERS OF CLASSES OF PHYSICALLY HANDICAPPED CHILDREN

The California School Code provides that the State Department of Education may prescribe minimum standards for the education of the physically handicapped minors;¹ and this provision of course includes the prescription of requirements for teachers in the field. However, with the exception of standards for teachers of classes of correction of speech defects, such requirements have not yet been established by the State Department of Education.

This does not mean that the matter is not considered important. On the contrary, the Commission for Special Education for the State Department of Education has given much attention and has formulated standards that will be recommended for adoption as soon as provision can be made for adequate personnel and training facilities to implement the recommendation. For one thing, the present staff limitations do not permit follow-up to determine compliance with standards; for another, there should be available concurrently teacher-training facilities, now inadequate, to enable teachers and candidates to meet the requirements. A start has been made in the effort to remedy these deficiencies and it is hoped that within the next few years the necessary facilities will be available.

Meanwhile the various school districts have set their own standards and requirements for special classes and for physically handicapped minors.

In some instances these are adequate, but in others little more is required than compliance with the general regulation that the teacher hold a state credential appropriate to the grade level of the class. It is therefore recommended that school administrators in selecting teachers for classes of physically handicapped children give careful consideration to the following recommended standards set up by the Commission, even though they do not, except in the field of correction of speech defects, as yet have the force of legal requirements.

RECOMMENDED GENERAL STANDARDS COMMON FOR ALL TEACHERS OF PHYSICALLY HANDICAPPED CHILDREN

The following general requirements apply to all special education teachers regardless of type of class.

¹ School Code section 3.617

A. HEALTH

1. Physical and mental fitness
2. Emotional stability and maturity
3. Exceptional endurance, with little lowering of vital and mental responses at end of school day.

B. PERSONAL QUALITIES AND ATTITUDES

1. Superior intelligence
2. Adaptability, tact, cheerfulness, and patience
3. Firmness and decision in discipline
4. A pleasant and well-modulated voice
5. Sincere interest in the welfare of handicapped children
6. Constructively sympathetic understanding of the problems and needs of the handicapped.

C. TRAINING

1. Candidates should be graduates of teacher-training institutions or be experienced teachers under thirty-five years of age, holding a bachelor of arts degree or the equivalent, and a basic teaching credential
2. Introductory courses in the study of exceptional or handicapped children (two semester units or the equivalent in summer session)
3. A course in mental hygiene

RECOMMENDED SPECIAL STANDARDS FOR TEACHERS OF EACH TYPE OF CLASS FOR PHYSICALLY HANDICAPPED CHILDREN

The following special requirements are in addition to the general requirements listed above as of common application.

Teachers of the Blind

Courses in the psychology of blindness with field work are recommended as basis training for teachers of blind pupils. These courses may precede or accompany the apprenticeship training of teachers.

A. BASIC TRAINING REQUIREMENTS

1. Special courses in the psychology of blindness with collateral studies in the anatomy and physiology of the eye and the pathology of vision; reports on special readings in the field of study with selected readings and reports.
2. Either a two unit course on the education of the blind or the equivalent in directed reading.

B. APPRENTICESHIP REQUIREMENTS

1. Teaching in classes for the blind under supervision for one year but with full responsibility for one small class for one full forty-minute period daily for one semester and for individual instruction for the same length of time.
2. Study of the Braille system through grade one and one-half and the passing of a test in the reading and writing of Braille.
3. Study of objective methods and preparation of a paper on some phase of objective teaching.
4. Residence in a dormitory with blind children and close association with them on the playground, in social affairs, special activities, excursions or camping trips for one semester. The equivalent of residence requirement may be worked out in nonresidential schools or classes.
5. Visits to eye-clinics in one of the larger hospitals; participation in the testing program in a school for the blind. Special instruction in the care of the eyes is highly desirable.

C. SPECIAL HEALTH REQUIREMENTS

1. Exceptional persons who are blind or partially blind and of sound constitution may be considered eligible for teaching the blind where the school organization is large enough for these teachers to be absorbed at a ratio of not over one to four or where the work is largely with individuals.
2. No persons with any other physical defect of a marked or serious nature should be considered eligible to teach the blind.
3. No blind person with additional or secondary defects such as defective hearing should be considered as teachers of the blind.

Teachers of Sight-saving Classes

The courses in psychology and the field work recommended for teachers of the blind are also essential for teachers of sight-saving classes. These teachers serve their apprenticeship training, however, in sight-saving classes in order that they may learn the techniques of sight conservation and become acquainted with the teaching materials and textbooks in this field of education.

A. BASIC TRAINING REQUIREMENTS

1. Special courses in the psychology of blindness with collateral studies in the anatomy and physiology of the eye and in the pathology of vision; reports on special readings in the field of study with selected readings and reports.
2. Either a two unit course on the teaching of sight-saving classes of the equivalent in directed reading.

B. APPRENTICESHIP REQUIREMENTS

1. At least one semester of observation and service as a teaching assistant in a regularly organized class in sight saving under standard conditions with full responsibility for the class for one full 40-minute period daily for at least six weeks prior to completion of the assignment.
2. Direct acquaintance with all teaching materials, devices, and methods especially suited to sight-saving classes. This should include some knowledge of room conditioning and visual correction.
3. Direct acquaintance with the home conditions of the pupils and a knowledge of how to advise parents on problems of light-conditioning, selection of reading materials, limitation of time given to reading, and general eye hygiene in the home.
4. Visits to eye-clinics in one of the larger hospitals; participation in an eye-testing program (gross test) in school or class.
5. Special instruction in eye hygiene.

Teachers of the Deaf

The training for teachers of classes of deaf children of from twenty-four to thirty semester hours of study, or the equivalent at some accredited center of training extends over a period of a year and calls for an internship during that period in a residential school for the deaf. Persons entering this field of teaching should show evidence of the use of good English and of the ability to speak easily and distinctly.

In all residential schools for the deaf there are some classes for the manual instruction of deaf children, taught by deaf teachers. These deaf teachers¹ receive their training at Gallaudet College, Washington, D. C.

A. BASIC TRAINING REQUIREMENTS

1. The following courses are the ones from which may be chosen the required semester hours of study:

Language development for the deaf-----	6 units
Speech training for the deaf-----	6 units
Lip reading for the deaf (1 unit) and for the hard of hearing (4 units)-----	5 units
Teaching of elementary subjects-----	5 units
Mechanical aids and auricular work-----	4 units
Seminar in the education of the deaf including history--	4 units
Observation and directed teaching (not more than 90 hours to be counted)-----	4 units
Extracurricular activities with deaf children, required part of internship-----	No units

¹ Deaf applicants for credentials are considered under special provisions. Deaf persons interested in securing a credential should consult the Superintendent of the California Schools for the Deaf, Berkeley.

B. APPRENTICESHIP TRAINING

1. Interneship in an accredited institution for the deaf, including teaching classes of deaf children and out-of-class association with deaf children.

Teachers of the Hard of Hearing

A teacher trained to teach the deaf can well qualify to teach the hard of hearing. Persons who have met the general requirement for teaching in the public schools can qualify as teachers of the hard of hearing if they can meet the special demands of the situation in the way of general background and special training. For the seriously hard of hearing who should be taught in classes for the hard of hearing, the best instructor is a trained teacher of the deaf. Because of special training in language development and speech training, such a teacher possesses the necessary technique in the teaching of language, which is a difficult subject for the hard-of-hearing child. The average teacher, trained to teach the hard of hearing only, lacks this particular understanding and training.

A. BASIC TRAINING REQUIREMENTS

1. The following courses constitute the special training for a teacher of lip reading:

Theory and methods of teaching lip reading-----	4 units
Technique of normal speech-----	2 units
Speech corrective work-----	2 units
Mental hygiene -----	2 units
Problems of the hard of hearing, testing, the use of hearing aids, practice teaching, observation-----	2 units

B. APPRENTICESHIP TRAINING

1. Teachers of the seriously hard of hearing, who should be taught in classes for the hard of hearing, should be teachers of the deaf. Such teachers serve an interneship in the teaching of deaf children.
2. The average teacher of the hard of hearing who takes special training in lip reading does not serve an apprenticeship or interne-ship.

Teachers of Orthopedic Classes

A. BASIC TRAINING REQUIREMENTS

1. Psychology: the psychology of the handicapped child. Either a one semester unit course or field study with selected readings and report on observations to a competent examining authority.

2. The technique of teaching crippled children: the causes, nature and effect of various crippling conditions; curriculum construction for crippled children; physical education for handicapped children; handicraft work for handicapped children; survey of orthopedic conditions limiting motor capacity. Either a two semester unit course or the equivalent in readings and observations with report to a competent examining authority.
3. Counseling: social, educational and vocational guidance for the handicapped. Either a one semester unit course or equivalent in readings and observations with report to a competent examining authority.

B. APPRENTICESHIP REQUIREMENTS

1. One year of teaching in a special class for crippled children, under competent supervision.

SPECIAL CREDENTIAL IN CORRECTION OF SPEECH DEFECTS

The State Board of Education has established the following requirements for the Special Credential in the Correction of Speech Defects. In order to qualify for reimbursement by the state of the excess costs of educating physically handicapped pupils, classes in the correction of speech defects must be taught by teachers who hold this special credential.

An applicant for a special credential in correction of speech defects must submit:

- I. A certificate from a physician licensed to practice medicine and surgery that the applicant is physically and mentally fit to engage in teaching service.
- II. A recommendation from the school or department of education of a teacher training institution approved by the State Board of Education for training teachers of correction of speech defects, with verification of:
 - A. A valid California teacher's certificate, credential, or life diploma of elementary or secondary school grade.
 - B. Verification of two years of successful teaching experience or four semester hours of superior directed teaching completed in an approved teacher training institution.
 - C. Personal characteristics necessary for successful work with handicapped children.

D. The completion of twelve semester hours of special work including:

1. Technique of normal speech
2. Mental hygiene
3. Speech defects and disorders
4. Speech correction
5. Directed teaching in speech correction
6. Problems in the teaching of speech correction.

Authorization for Service. This credential authorizes the holder to teach correction of speech defects in the public schools of the state in the grades indicated upon the credential. The grade of the credential corresponds to that of the regular teaching credential held.

Term. This credential may be issued for a period to correspond to the term of the basic teaching credential held.¹

¹ Reprinted from *Regulations Governing Granting of Credentials and Certificates for Public School Service in California*, State of California Department of Education Bulletin No. 12, June 15, 1935.



APPENDIX

LEGAL PROVISIONS FOR THE
EDUCATION OF PHYSICALLY HANDICAPPED
MINORS AND FOR VOCATIONAL
REHABILITATION IN CALIFORNIA



EDUCATION OF PHYSICALLY HANDICAPPED MINORS

School Code Provisions

Article IV—Education of Physically Handicapped Minors.

(Heading repealed and added by Stats. 1939, Chap. 214.)

3.605. Subject to the provisions of this article the governing board of any school district may make such special provisions as in its judgment may be necessary for the education of physically handicapped minors. (Added by Stats. 1939, Chap. 214.)

3.606. Any minor who, by reason of a physical impairment, can not receive the full benefit of ordinary educational facilities, shall be considered a physically handicapped individual for the purposes of this article. Minors with speech disorders or defects shall be considered as being physically handicapped. (Added by Stats. 1939, Chap. 214.)

3.607. No minor shall be required to take advantage of the special provisions for the education of physically handicapped minors if the parents or guardian of such minor file a statement with the governing board of the school district showing that such minor is receiving adequate educational advantages. (Added by Stats. 1939, Chap. 214.)

3.608. Physically handicapped minors may be instructed in special schools or special classes, in hospitals, sanatoriums or preventoriums, in the home through the employment of home instructors, by cooperative arrangement with the Bureau of Vocational Rehabilitation of the State Department of Education, or by any other means approved by the State Department of Education. (Added by Stats. 1939, Chap. 214.)

3.609. Individual counseling and guidance in social and vocational matters shall be provided as part of the instructional program for physically handicapped pupils. Upon approval by the State Department of Education the governing board of any school district may separately, or in cooperation with the governing board or boards of one or more other school districts, or in cooperation with the Bureau of Vocational Rehabilitation of the State Department of Education, employ a special coordinator, who shall make a study of employment and occupational opportunities and shall assist in the coordination of the education of the physically handicapped minors with the commercial and industrial pursuits of the community, so as to prepare such minors for employment. (Added by Stats. 1939, Chap. 214.)

3.610. The State Department of Employment shall, through the State Employment Service, cooperate with local school officials and the State Department of Education in the placement of physically handicapped individuals. (Repealed by Stats. 1937, Chap. 216; added by Stats. 1939, Chap. 214.)

3.611. The governing board of a school district may provide for the transportation of pupils assigned to special schools or classes for physically handicapped pupils, and must provide such transportation for those pupils whose physical handicaps prevent their walking to school. (Repealed by Stats. 1937, Chap. 216; added by Stats. 1939, Chap. 214.)

3.612. Necessary care may be provided during school hours for pupils whose attendance has been irregular because of physical handicaps, and such employees as may be needed may be employed to provide such care. (Repealed by Stats. 1937, Chap. 216; added by Stats. 1939, Chap. 214.)

3.613. Deaf minors and those suffering the effects of spastic paralysis may be admitted at the age of three years to special schools or classes established for such minors. (Added by Stats. 1939, Chap. 214.)

3.614. The governing board of a school district may establish regulations determining who can profit by and who shall receive the special instruction provided by this article, said regulations to be subject to such standards as may be prescribed by the State Department of Education. (Added by Stats. 1939, Chap. 214.)

3.615. Special classes or individual instruction provided for pre-tuberculous, convalescent or other physically handicapped minors in hospitals, sanatoriums and preventoriums, may be maintained in such institutions within or without the school district, and the attendance of pupils therein shall be credited to the district providing such instruction. (Added by Stats. 1939, Chap. 214.)

3.616. It shall be the duty of the Superintendent of Public Instruction to promote and direct special instruction in the public schools for physically handicapped minors, as provided in this article, and he shall have power to employ such professional and other personnel as may be necessary for this purpose, and to perform such other duties as may be necessary to give full effect to this article. (Added by Stats. 1939, Chap. 214.)

3.617. The State Department of Education may prescribe minimum standards for the special education of physically handicapped

minors. No apportionment of State funds shall be made by the Superintendent of Public Instruction to any school district on account of the instruction of physically handicapped minors unless the standards prescribed for such instruction have been complied with. (Added by Stats. 1939, Chap. 214.)

3.618. Four hours of actual attendance of physically handicapped pupils in special classes shall count as one day of attendance. Each clock hour of teaching time devoted to individual instruction of physically handicapped pupils shall count as one day of attendance. The average daily attendance of all physically handicapped pupils shall be computed by dividing the total number of days of attendance of such pupils by the number of days taught in the regular schools of the district. (Amended by Stats. 1941, Chap. 445.)

3.619. The attendance of all physically handicapped pupils instructed in accordance with the provisions of this article, including those instructed under cooperative arrangements with the Bureau of Vocational Rehabilitation of the State Department of Education, shall be reported annually to the county superintendent of schools together with all other attendance on forms provided by the Superintendent of Public Instruction. (Added by Stats. 1939, Chap. 214.)

3.620. The superintendent of schools or the governing board of each school district shall report annually to the county superintendent of schools and to the Superintendent of Public Instruction on forms provided by the Superintendent of Public Instruction, the total average daily attendance of physically handicapped pupils by types of instruction provided, the cost of educating such pupils, and such other information as may be required for the computation of the excess cost incurred for the education of physically handicapped pupils. (Amended by Stats. 1931, Chap. 160; repealed and added by Stats. 1939, Chap. 214.)

3.621. The Superintendent of Public Instruction shall determine the amount of the excess cost incurred by each school district for the education of physically handicapped pupils. The term "excess cost" as employed in this section is defined as including the total current expenditures incurred for remedial classes and for individual instruction of physically handicapped children, plus the excess amount of the current expenditures made for all other physically handicapped pupils instructed in special schools, in special classes, or in regular classes over the amount expended for current expenditures for an

equal number of units of average daily attendance of pupils not classified as physically handicapped pupils. The term "remedial classes" as herein employed is defined as including special classes providing remedial instruction for physically handicapped pupils who are excused in small numbers for a portion of a class period from regular classes, without appreciable reduction in the costs of such regular classes. (Repealed and added by Stats. 1939, Chap. 214.)

3.622. County superintendents of schools may in their discretion provide for the education of physically handicapped minors who otherwise would be denied proper educational advantages. Such education may be provided in emergency elementary schools, as authorized to be established elsewhere in this code; by the employment of emergency teachers to provide special instruction in the regular schools of the districts of the county; by the maintenance of special classes of secondary grade; by the employment of home instructors to give individual instruction in the home or at the bedside in institutions; by cooperation with the Bureau of Vocational Rehabilitation of the State Department of Education in the provision of individual instruction and/or coordination services; or by contract with the county superintendent of schools of another county or with the governing board of any school district in another county.

The costs incurred by county superintendents of schools for the education of physically handicapped children of elementary and secondary grade shall be paid from the unapportioned county elementary school fund and the unapportioned county high school fund respectively. (Repealed and added by Stats. 1939, Chap. 214.)

3.623. The attendance of physically handicapped pupils instructed under the provisions of section 3,622 shall be credited as follows:

1. The attendance of pupils taught in emergency elementary schools shall be credited to such emergency schools.

2. The attendance of elementary school pupils given individual instruction in the home or at the bedside in institutions or by cooperative arrangement with the Bureau of Vocational Rehabilitation of the State Department of Education shall be credited to an emergency elementary school maintained for physically handicapped pupils, if such a school is maintained in the county, or if no such school is maintained in the county such attendance credited to any emergency elementary school maintained in the county, but not to more than one such emergency elementary school. If no emergency school is maintained in the county, the total number of days of attendance earned by such pupils shall be divided by 170 to compute average daily attendance and the

average daily attendance so computed shall be credited to the unapportioned county elementary school fund as attendance upon a single emergency elementary school for individual instruction of physically handicapped children.

3. The attendance of pupils of secondary grade given individual instruction in the home or in institutions or by cooperative arrangement with the Bureau of Vocational Rehabilitation of the State Department of Education, or instructed in special classes of secondary grade, shall be credited to the unapportioned county high school fund.

4. The attendance of pupils taught by emergency teachers in the regular schools of the districts of any county shall be credited to such districts.

5. The attendance of pupils residing in one county and educated under contract with the county superintendent of schools or governing board of a school district of another county, shall be credited to the county or district in which such pupils are educated. (Repealed and added by Stats. 1939, Chap. 214.)

3.624. Four hours of actual attendance of physically handicapped pupils educated under the provisions of Section 3.622 of this code in special classes shall count as one day of attendance. Each clock hour of teaching time devoted to individual instruction of physically handicapped pupils under the provisions of said Section 3.622 shall count as one day of attendance. (Amended by Stats. 1941, Chap. 445.)

3.625. Each county superintendent of schools providing for the education of physically handicapped children as authorized in Section 3.622 of this code shall report annually to the Superintendent of Public Instruction on forms provided by the latter the total average daily attendance of physically handicapped pupils by types of instruction provided, the cost of educating such pupils, and such other information as may be required, for each elementary and high school district in which such education is provided. (Added by Stats. 1941, Chap. 445.)

COMPULSORY EDUCATION OF THE DEAF

School Code Provisions

CHAPTER 3. COMPULSORY EDUCATION OF THE DEAF

1.500. Every parent, guardian or other person having charge or control of any minor who is over five years of age and is less than 20 years of age and who, by reason of deafness or impaired hearing, is unable to benefit materially by the methods of instruction in use in the public schools, shall be required to send such minor to a school

or class for the deaf maintained by a school district or by the State for the full time for which such school or class shall be in session. Such child or minor shall attend such school or class year after year until completion of the prescribed course of study or until discharged for good reason by the principal or other person in charge of such school or class with the approval of the governing board. (Added by Stats. 1931, Chap. 1112.)

1.501. There is hereby created in each county a board to be known as the board for the education of the deaf. Such board shall consist of the principal of the California School for the Deaf who shall be chairman thereof, the Chief of the Division of Special Education in the State Department of Education and, if there be such, the principal or other person in charge of a public school or class for the deaf or those with impaired hearing maintained by the district in which the child resides. Such board shall be responsible for all matters pertaining to the attendance and the exemption therefrom of deaf children and those with impaired hearing, upon the schools or classes. Said board shall meet at the call of the chairman. (Added by Stats. 1931, Chap. 1112.)

1.502. The following classes of children shall be exempt from the provisions of this chapter: (Added by Stats. 1931, Chap. 1112.)

1.503. Children whose bodily or mental conditions are such as to prevent or render inadvisable their attendance upon a school or class. (Added by Stats. 1931, Chap. 1112.)

1.504. Children afflicted with such contagious or offensive disease or possessing such habits as to render their presence a menace to the health or morals of other pupils, or for any reason deemed good and sufficient by the board for the education of the deaf. (Added by Stats. 1931, Chap. 1112.)

1.505. Children who are being efficiently and satisfactorily taught for at least four hours per day for at least one hundred eighty days per year in a private school, or by a private tutor or other person holding a valid and proper State credential, using the course of study as issued by the principal of the California School for the Deaf and as approved by the State Superintendent of Public Instruction. No exemption shall be allowed under the provisions of this section unless approved by the board for the education of the deaf for the county in which the child resides. (Added by Stats. 1931, Chap. 1112.)

1.506. Children who have completed the prescribed course of the schools or classes for the deaf or have completed the requirements of the sixth grade of schools for the deaf and are in attendance at a junior

high or high school, where, in the opinion of the board for the education of the deaf of the county in which they reside they are able to receive a satisfactory education; provided, they comply with all requirements of the general State law relating to compulsory education. (Added by Stats. 1931, Chap. 1112.)

1.507. It shall be the duty of every attending or consulting physician who examines any child under 20 years found to be totally deaf or with impaired hearing to report at once to the principal of the California School for the Deaf the name, age, residence and name of parent or guardian of such minor. (Added by Stats. 1931, Chap. 1112.)

1.508. It shall be the duty of the principal of the California School for the Deaf to immediately notify the superintendent of schools of the county, city or city and county of which said child is a resident, the name, age, residence of such child and name and residence of the parent or guardian of such child. (Added by Stats. 1931, Chap. 1112.)

1.509. It shall also be the duty of city, county and city and county health officers, all school nurses, the principal or other person in charge of every public or private school, all truant officers and welfare workers, to report at once to the principal of the California School for the deaf the name, age, sex, residence and name and residence of parent or guardian of any child under 20 years of age and found to be deaf or with impaired hearing, examined by them, to the principal of the California School for the Deaf. (Added by Stats. 1931, Chap. 1112.)

1.510. The principal of the California School for the Deaf shall be supplied with proper blanks whereby he will notify parents or guardians of the children reported, of the address of the California School for the Deaf and also of the nearest public school or class for the deaf and the nearest public school or class for the hard of hearing, if there be either or both in the county in which the child resides with information concerning the advantages offered by the school and the benefits to accrue to the child from attendance at such schools or either of them. (Added by Stats. 1931, Chap. 1112.)

1.511. The principal of the California School for the Deaf shall issue to said parent or guardian of said minor thus reported an official registration card signifying that said child has been properly registered with the local and State boards of education and to send to the school or class for the deaf located nearest the place of residence of such parent or guardian the name, address and age of said minor child. (Added by Stats. 1931, Chap. 1112.)

1.512. No official or agent or representative in carrying out the provisions of this act shall enter any home or take charge of any child over the objection of the parents, or either of them, or the person standing in loco parentis or having custody of said child. (Added by Stats. 1931, Chap. 1112.)

1.513. Any parent, guardian, or other person having control or charge of any child subject to the provisions of this chapter who shall fail to comply with the provisions of this chapter, shall, unless excused or exempted therefrom as hereinbefore provided, be deemed guilty of a misdemeanor, and, upon conviction, shall be liable, for the first offense, to a fine of not less than ten nor more than fifty dollars or to imprisonment for not more than five days, or to both such fine and imprisonment, and for each subsequent offense he shall be liable to a fine of not less than ten, nor more than fifty, dollars, or to imprisonment for not less than five days, nor more than twenty-five days, or to both such fine and imprisonment. (Added by Stats. 1931, Chap. 1112.)

1.514. Nothing in this act shall be construed as limiting the power of a parent or guardian or person standing in loco parentis to determine what treatment or correction of physical defect or defects shall be provided for a child or the agency or agencies to be employed for such purpose. (Added by Stats. 1931, Chap. 1112.)

CALIFORNIA SCHOOL FOR THE DEAF

Political Code Provisions

2236. Name. The State school for the deaf, located in Berkeley, Alameda County, shall be known and designated as the California School for the Deaf. (Added by Stats. 1923, Chap. 70.)

2237. Part of school system. The California School for the Deaf is a part of the school system of the State except that it shall derive no revenue from the public school fund, and has for its object the education of the deaf who, by reason of their infirmity, can not be taught in the public schools. (Repealed and added by Stats. 1923, Chap. 70.)

2238. Who entitled to benefits. Every deaf person resident of the State, of suitable age and capacity, is entitled to an education in this school free of charge. (Repealed and added by Stats. 1923, Chap. 70.)

2239. Nonresidents. Such persons not residents of this State may be admitted to the benefits of this school upon paying to the State Department of Education the school year cost for the maintenance, care, and instruction of persons at said school, payable quarterly in advance,

the cost of such care, maintenance, and instruction shall be determined by the department of education with the approval of the Department of Finance. (Amended by Stats. 1931, Chap. 419.)

2240. Clothing, maintenance and transportation of pupils. If the parent or guardian of any pupil in this school shall be unable either himself or from the estate of such child to clothe such child, or pay for its transportation to and from school, or for necessary dental work, eye care, operations and hospitalization of such child while at the school, or is unable either himself or from the estate of such child to reimburse the State Department of Education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency, the parent or guardian may apply for a certificate to that effect to the superior court of the county wherein such parent or guardian of such child is resident, and if the court is satisfied that the parent or guardian either himself or from the estate of such child is unable to provide suitable clothing or transportation, necessary dental work, eye care, operations and hospitalization for the child, or is unable either himself or from the estate of such child to reimburse the State Department of Education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency, the court shall issue a certificate to that effect. The application for such certificate may also be made to the court by the principal of the school. If it appears to the satisfaction of the court that the parent or guardian has sufficient pecuniary ability or that there are sufficient funds in the estate of the child to provide suitable clothing, transportation, dental work, eye care, operations and hospitalization for the child or, as the case may be, to reimburse the State Department of education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency, the court shall not issue such certificate, but shall, according to the nature of the application before it, either order the principal to provide the child with suitable clothing, transportation, dental work, eye care, operations and hospitalization, or order the parent or guardian either himself or from the estate of such child as the court may determine to reimburse the State Department of Education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency. If the State Department of Education is not reimbursed by the parent or guardian personally or from the estate of such child for expenditures made by the principal under the order of the court or if the parent or guardian does not comply with an order of the court to reimburse the State Department of Education either personally or from the estate of such child for expenses incurred by it

in providing dental work, eye care, operations or hospitalization for such child in an emergency the principal may sue the parent or guardian, in the name of the State, to recover any moneys paid out by order of the court or due the State Department of Education as reimbursement under an order of the court. All moneys expended under the authority of any such certificate for clothing and transportation, as hereinafter provided, and not to exceed the sum of seventy-five dollars per annum for necessary dental work, eye care, operations and hospitalization, and all moneys expended by the State Department of Education for expenses not to exceed seventy-five dollars per annum incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency for which the State Department of Education can not be reimbursed by the parent or guardian of such child as shown by such certificate, shall constitute a legal county charge against the county from which said certificate is issued. Such certificate shall be presented to the principal of said school and it shall be the duty of said principal when the certificate shows the parent or guardian of said child is unable either himself or from the estate of the child to clothe such child, or pay for its transportation to and from school, or for necessary dental work, eye care, operations and hospitalization of such child while in school, to clothe said child and provide such transportation, necessary dental work, eye care, operations and hospitalization, the expense thereof to be advanced by the State Department of Education out of money appropriated for the support of the school. Upon presentation to the board of supervisors of the county in which any certificate provided for in this section is issued, of an itemized claim, duly sworn to by the principal of the school before an officer authorized to administer oaths, for the expense for clothing and transportation and other items provided and furnished under the authority of said certificate, or for the reimbursement of the State Department of Education as hereinbefore provided said board of supervisors shall audit and approve said claim, and the county auditor of said county shall thereupon include the amount thereof in his State settlement report, prescribed in Section 3868 of this Code and the amount of such settlement and all reimbursements of the State Department of Education under this section shall be credited by the State Controller to the then current appropriation for the support and maintenance of said school. All pupils in the school shall be maintained except as hereinbefore provided at the expense of the State. (Amended by Stats. 1935, Chap. 727.)

2241. Administration by State Department of Education. The school shall be under the administration of the State Department of Education as provided by law. (Added by Stats. 1923, Chap. 70.)

2242. Powers and duties of State Department of Education in relation to California School for the Deaf. The powers and duties of the State Department of Education in relation to the California School for the Deaf are as follows:

1. To prescribe rules for the government of the school;
 2. To appoint the principal and other officers and employees in accordance with the provisions of Section 362a of the Political Code;
 3. To remove for cause any officer, teacher or employee;
 4. To fix the compensation of officers, teachers and employees.
- (Added by Stats. 1923, Chap. 70.)

2243. Principal. The principal of the school must have had not less than three years' experience in the art of teaching the deaf and must hold a credential issued by the State Board of Education authorizing him to teach in secondary schools of California. (Repealed and added by Stats. 1923, Chap. 70.)

2244. Teachers. All teachers appointed or employed in the California School for the Deaf must hold credentials of kindergarten, elementary or secondary grade according to the work for which they are employed, such credentials to be granted by the State Board of Education. (Repealed and added by Stats. 1923, Chap. 70.)

2245. Powers and duties of principal. The powers and duties of the principal shall be such as are assigned to him by the State Director of Education. (Added by Stats. 1923, Chap. 70.)

2246. Teacher Training Courses. The Director of Education may authorize the California School for the Deaf to establish and maintain teacher training courses designed to prepare teachers of the public schools and such other persons holding a credential issued by the State Board of Education as may be recommended by the president of a State college, to give instruction to the deaf and the hard of hearing. The Director of Education shall prescribe standards for the admission of persons to such courses, and for the content of such courses. (Added by Stats. 1939, Chap. 318.)

CALIFORNIA SCHOOL FOR THE BLIND

Political Code Provisions

2251. Name. The State school for the blind, located in Berkeley, Alameda County, shall be known and designated as the California School for the Blind. (Added by Stats. 1923, Chap. 70.)

2252. Part of School System. The California School for the Blind is a part of the school system of the State except that it shall derive no revenue from the public school fund, and has for its object the education of the blind, who, by reason of their infirmity, can not be taught in the public schools. (Added by Stats. 1923, Chap. 70.)

2253. Who entitled to benefits. Every blind person resident of this State, of suitable age and capacity, is entitled to an education in this school free of charge. (Added by Stats. 1923, Chap. 70.)

2254. Nonresidents. Such persons not residents of this State may be admitted to the benefits of this school upon paying to the State Department of Education the sum of the school year cost for the maintenance, care, and instruction of persons at said school, payable quarterly in advance, the cost of such care, maintenance, and instruction shall be determined by the Department of Education with the approval of the Department of Finance. (Amended by Stats. 1931, Chap. 418.)

2255. Clothing, maintenance and transportation of pupils. If the parent or guardian of any pupil in this school shall be unable either himself or from the estate of such child to clothe such child, or pay for its transportation to and from school, or for necessary dental work, eye care, operations and hospitalization of such child while at the school, or is unable either himself or from the estate of such child to reimburse the State Department of Education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency, the parent or guardian may apply for a certificate to that effect to the superior court of the county wherein such parent or guardian of such child is resident, and if the court is satisfied that the parent or guardian either himself or from the estate of such child is unable to provide suitable clothing or transportation, dental work, eye care, operations and hospitalization for the child, or is unable either himself or from the estate of such child to reimburse the State Department of Education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency, the court shall issue a certificate to that effect. The application for such certificate may also be made to the court by the principal of the school. If it appears to the satisfaction of the court that the parent or guardian has sufficient pecuniary ability or that there are sufficient funds in the estate of the child to provide suitable clothing, transportation, dental work, eye care, operations and hospitalization for the child or, as the case may be, to reimburse the State Department of Education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency, the

court shall not issue such certification, but shall according to the nature of the application before it, either order the principal to provide the child with suitable clothing, transportation, dental work, eye care, operations and hospitalization, or order the parent or guardian either himself or from the estate of such child, as the court may determine to reimburse the State Department of Education for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency. If the State Department of Education is not reimbursed by the parent or guardian personally or from the estate of such child for expenditures made by the principal under the order of the court or if the parent or guardian does not comply with an order of the court to reimburse the State Department of Education either personally or from the estate of such child for expenses incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency the principal may sue the parent or guardian, in the name of the State, to recover any moneys paid out by order of the court or due the State Department of Education as reimbursement under an order of the court. All moneys expended under the authority of any such certificate for clothing and transportation, as hereinbefore provided, and not to exceed the sum of seventy-five dollars per annum for necessary dental work, eye care, operations and hospitalization, and all moneys expended by the State Department of Education for expenses not to exceed seventy-five dollars per annum incurred by it in providing dental work, eye care, operations or hospitalization for such child in an emergency for which the State Department of Education can not be reimbursed by the parent or guardian of such child as shown by such certificate, shall constitute a legal charge against the county from which said certificate is issued. Such certificate shall be presented to the principal of said school and it shall be the duty of said principal when the certificate shows the parent or guardian of said child is unable either himself or from the estate of the child to clothe such child, or pay for its transportation to and from school, or for necessary dental work, eye care, operations and hospitalization of such child while in school, to clothe said child and provide such transportation, dental work, eye care, operations and hospitalization the expense thereof to be advanced by the State Department of Education out of money appropriated for the support of the school. Upon presentation to the board of supervisors of the county in which any certificate provided for in this section is issued, of an itemized claim, duly sworn to by the principal of the school before an officer authorized to administer oaths, for the expense for clothing and transportation and other items provided and furnished under the authority of said certificate, or for the reimbursement of the State Department of Education as hereinbefore

provided said board of supervisors shall audit and approve said claim, and the county auditor of said county shall thereupon include the amount thereof in his State settlement report, prescribed in Section 3868 of this code and the amount of such settlement and all reimbursements of the State Department of Education under this section shall be credited by the State Controller to the then current appropriation for the support and maintenance of said school. All pupils in the school shall be maintained, except, as hereinbefore provided, at the expense of the State. (Amended by Stats. 1935, Chap. 727.)

2256. Administration by State Department of Education. The school shall be under the administration of the State Department of Education as provided by law. (Added by Stats. 1923, Chap. 70.)

2257. Powers and duties of the State Department of Education in relation to the California School for the Blind. The powers and duties of the State Department of Education in relation to the California School for the Blind are as follows:

1. To prescribe rules for the government of the school;
 2. To appoint the principal and other officers and employees in accordance with the provisions of Section 362a of the Political Code;
 3. To remove for cause any officer, teacher or employee;
 4. To fix the compensation of officers, teachers and employees.
- (Repealed and added by Stats. 1923, Chap. 70.)

2258. Principal. The principal of the school must have had not less than three years' experience in the art of teaching the blind and must hold a credential issued by the State Board of Education authorizing him to teach in secondary schools of California. (Added by Stats. 1923, Chap. 70.)

2259. Teachers. All teachers appointed or employed in the California School for the Blind must hold credentials of kindergarten, elementary or secondary grade according to the work for which they are employed, such credentials to be granted by the State Board of Education. (Added by Stats. 1923, Chap. 70.)

2260. Powers and duties of principal. The powers and duties of the principal shall be such as are assigned to him by the State Director of Education. (Added by Stats. 1923, Chap. 70.)

2261. Kindergarten. The State Department of Education, as soon as proper facilities may be provided therefor in connection with the California School for the Blind, shall establish and maintain a kindergarten service for the care and teaching of children under school age, and said department shall prescribe the rules and regulations which

shall govern the conduct of such kindergarten service, appoint such teachers as it may determine necessary, and fix their salaries. (Added by Stats. 1927, Chap. 156.)

2262. Vocational education. The State Department of Education, in addition to the teaching and education of the blind of suitable age as in this article provided, shall adopt such measures and prescribe such rules for the giving of vocational training to the attendants at the school, in order that such pupils may be equipped upon their graduation to engage in occupations or industries by which they may become self-supporting. The board shall determine the nature and scope of such vocational training, with the view of best adapting the blind to follow useful and productive pursuits, after the completion of their education. (Added by Stats. 1927, Chap. 156.)

2263. In order to prepare blind residents of California to do social work among the blind, the California School for the Blind is hereby authorized to give special courses of instruction to blind residents of California who have received collegiate training in social service and to issue a special social service certificate to those students who complete such courses satisfactorily. (Added by Stats. 1937, Chap. 854.)

VOCATIONAL REHABILITATION

School Code Provisions

Article IX. Vocational Rehabilitation.

3.510. The people of the State of California do hereby, through their legislative authority, accept the provisions and benefits of the act of Congress entitled "An act to provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment," approved June 2, 1920.

3.511. In accepting the provisions and benefits of said Act of Congress, the people of the State of California agree to observe and comply with all of its requirements.

3.512. The State Board of Education, heretofore designated as the State board for Vocational Education, is hereby also designated as the board for the purpose of cooperating with the Federal Board for Vocational Education, in carrying out the provisions and purposes of the Federal act providing for the vocational rehabilitation of persons disabled in industry or otherwise.

3.513. The State Board of Education is hereby empowered and directed to cooperate with the Federal Board for Vocational Education in the administration of the said act of Congress and to provide for the

supervision and support of such courses of vocational rehabilitation as it may deem essential, in order to carry out the provisions of the Federal act and of this Article.

3.514. It is hereby made the duty of the State Board of Education and the Industrial Accident Commission to formulate a plan of cooperation in accordance with the provisions of the Federal act, and of this Article, such plan to become operative when approved by the Governor of the State.

3.515. The State Board of Education shall direct its program of vocational rehabilitation through the director of education. (Amended by Stats. 1931, Chap. 981.)

3.516. The State Board of Education is hereby authorized to appoint all necessary professional assistants and teachers; to appoint such other assistants as may be necessary; to fix and pay the compensation of such employees; and to perform any other duties necessary in order to carry out the provisions of the Federal act and of this Article. (Amended by Chap. 674, Stats. of 1941.)

CHAPTER 6. VOCATIONAL REHABILITATION FUND

Article 1. Creation

4.100. The State Treasurer, as required by the Federal act relating to vocational rehabilitation mentioned elsewhere in this Code, is hereby authorized and required to receive and provide for the proper custody of all funds apportioned to the State of California under the provisions of that act.

4.101. The State Treasurer is also authorized and required to receive and provide for the proper custody of all moneys appropriated by this Article, of all moneys that may be hereafter appropriated for the purpose of carrying out the provisions of this Article, and of all moneys that may be received by the State Board of Education under the provisions of this Chapter.

4.102. For each fiscal year, the sum of seventy thousand dollars (\$70,000) is hereby appropriated out of any moneys in the State Treasury not otherwise appropriated to be used in whole or in part by the State Board of Education for the purpose of carrying out the provisions of this Article. (Amended by Stats. 1931, Chap. 489.)

4.102a. In addition to any other sums provided for in this article, there is hereby appropriated from any funds in the State Treasury not otherwise appropriated, for each fiscal year, the sum of one hundred

and ten thousand dollars (\$110,000), or so much thereof as will equal such amount in excess of sixty-five thousand dollars (\$65,000) as is received by the State from the Federal Government or any agency thereof during such fiscal year for the purposes of this chapter. (Amended by Stats. 1941, Chap. 819.)

4.103. The moneys mentioned in this article shall constitute the "vocational rehabilitation fund" of the State Board of Education, which fund is hereby created.

RESOLUTION OF STATE BOARD OF EDUCATION ESTABLISHING THE COMMISSION FOR SPECIAL EDUCATION

The State Board of Education by motion approved, appoints a Commission for Special Education, whose duty it shall be to administer the policies of the State Board of Education relative to special education. The Commission will recommend to the Board through its Executive Officer the adoption of such policies as may be deemed advisable in the administration of the program of special education.

The members of the Commission for Special Education shall be (1) the Superintendent of Public Instruction, who shall serve as ex officio member of said Commission and as its Executive Officer; and (2) the following bureau chiefs:

Chief of Bureau for the Education of the Blind

(Principal, California School for the Blind)

Chief of Bureau for the Education of the Deaf

(Principal, California School for the Deaf)

Chief of Bureau of Mental Hygiene

Chief of Bureau of Correction of Speech Defects

Chief of Bureau of Vocational Rehabilitation

The Commission for Special Education shall act in lieu of a Chief of Division of Special Education.

The bureau chiefs shall administer their programs in their respective fields, and the Chief of Bureau of Vocational Rehabilitation shall also administer the program in the field of education of crippled children.

One of the bureau chiefs shall serve as chairman of the Commission. The chairmanship shall rotate annually among the bureau chiefs of the Commission according to seniority of service as heads of their respective fields in the State Department of Education.

The duties of the chairman of the Commission shall be set up by the members of the Commission.

The Commission shall hold regular quarterly meetings and such special meetings as may be deemed necessary.

